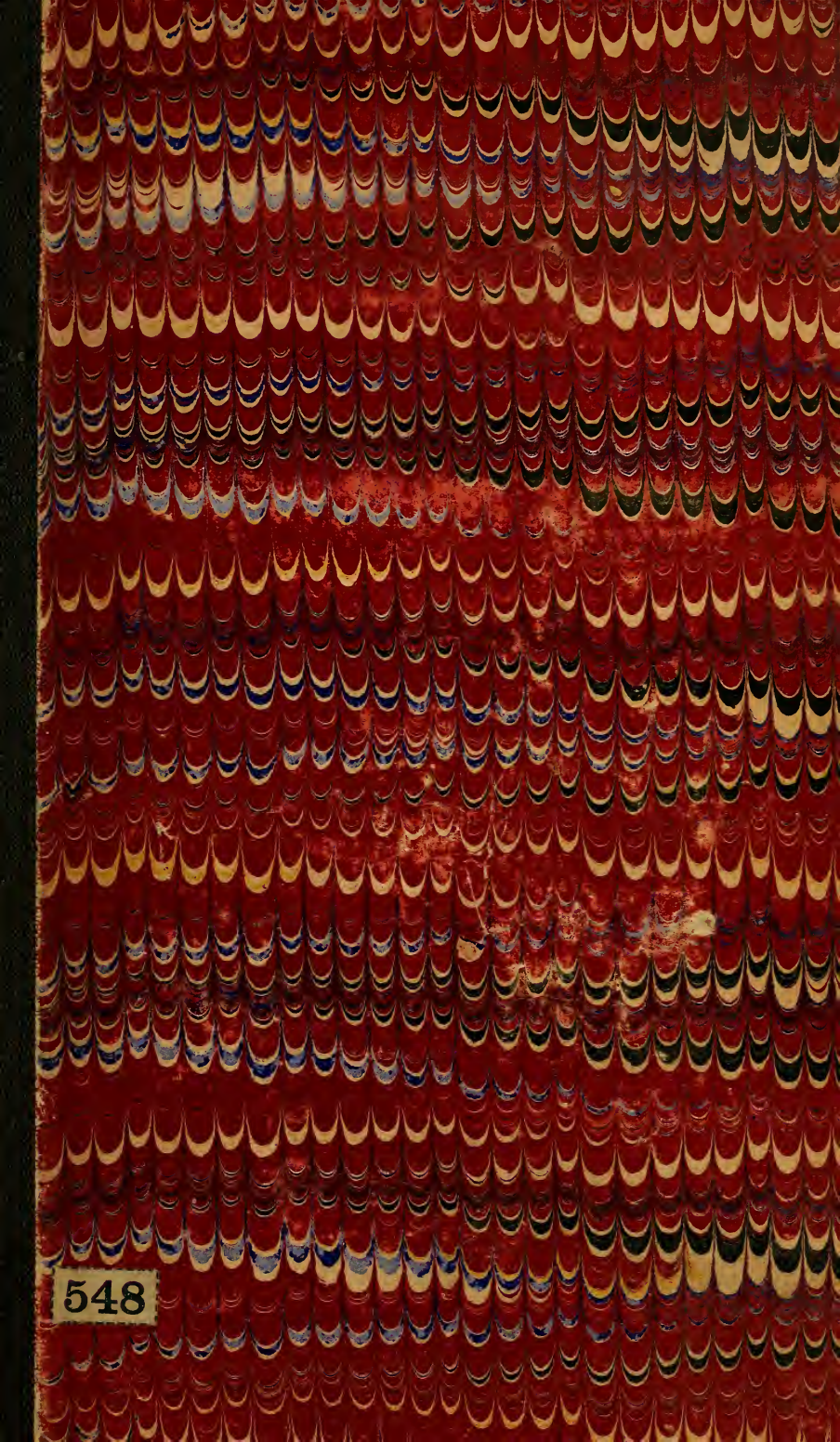




548

11. L. 53

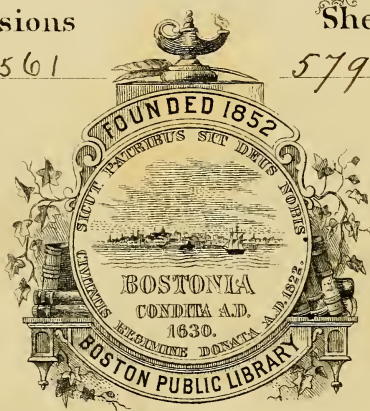
PROPERTY OF THE
PUBLIC LIBRARY OF THE
CITY OF BOSTON,
DEPOSITED IN THE
BOSTON MEDICAL LIBRARY.

Accessions

430.561

Shelf No.

5794.35



Received April 24, 1889.



Digitized by the Internet Archive
in 2011 with funding from
Open Knowledge Commons and Harvard Medical School



21

SUPPLEMENT TO MOTHER AND CHILD.

First Premium for 1888.

DIPHTHERIA :

ITS HISTORY, SYMPTOMS, CAUSE, AND RADICAL, SPEEDY CURE,
WITHOUT THE USE OF POISONOUS MEDICATION.

SCARLET FEVER,

AND ITS SUCCESSFUL TREATMENT. MEASLES. WITH CAUSES
OF THROAT DISEASES. CATARRH AND KIN-
DRED CONSTITUTIONAL DISTURBANCES.

THIRD EDITION. REVISED AND ENLARGED.

BY

MELVILLE C. KEITH, M. D.,

Honorary Member of the Indiana State Physio-Medical Society.

Member of American Physio-Medical Association of Physicians and Surgeons.

PRICE, FIFTY CENTS.

C. D. Rayner

MINNEAPOLIS, MINN. :

~~ALFRED ROBER, BOOK AND JOB PRINTER,~~

~~307 HENNEPIN AVE.~~

~~1888~~



DIPHTHERIA :

ITS HISTORY, SYMPTOMS, CAUSE, AND RADICAL, SPEEDY CURE,
WITHOUT THE USE OF POISONOUS MEDICATION.

SCARLET FEVER,

AND ITS SUCCESSFUL TREATMENT. MEASLES. WITH CAUSES
OF THROAT DISEASES. CATARRH AND KIN-
DRED CONSTITUTIONAL DISTURBANCES.

THIRD EDITION. REVISED AND ENLARGED.

BY

MELVILLE C. KEITH, M. D.,

*Honorary Member of the Indiana State Physio-Medical Society.
Member of American Physio-Medical Association of Physicians and Surgeons.*



MINNEAPOLIS, MINN. :
ALFRED ROPER, BOOK AND JOB PRINTER,
307 HENNEPIN AVE.
1888

B.H.

430.561

Apr. 24. 1887

Preface to Third Edition.



It is now nearly ten years since the first edition of this book was printed. The treatment now given is compact, safe and efficient. No child should die of the disease Diphtheria, unless that child may have a diseased heart. The treatment, as given, is believed to be able to save every case not struck with death, because it is correct, and because it has been successful so far.

To members of his own Medical faith he would say that very many remedies have not been suggested or advised because it was not deemed advisable in a family to divide the attention from the main object, viz.: To relieve and cure the child as rapidly as possible. For this reason, SUMACH, WILD INDIGO, CHERRY BARK, BLACKBERRY ROOT, and many others, have not been named. The writer is positive that the principles, STIMULATION and ELIMINATION are correct. It does not so much matter the special agent if the action is maintained.

The Lord hath helped us.

Minneapolis, Minn., April 17th, 1888.

The History of Diphtheria.

CHAPTER I.

The term "diphtheria which is now applied to a well known malady affecting visibly the mucous surfaces of the human body, more particularly those of the throat and fauces, is derived from the Greek word *diphthera*, a skin or membrane. Many persons look upon diphtheria as a recent disease, but the weight of medical opinion inclines to the belief that a writer in the Second Century has given a very accurate description of the affection under the name of *MALUM EGYPTIACUM*. This writer (Aretus) gives a very minute and detailed array of symptoms in every way corresponding to those of the present day. Hippocrates who lived six hundred years previous to Aretus, has, in a few words, summed up a case which for brevity and perspicacity will challenge any other writer since his time to equal. This description which we copy covers the essential facts as they occur in a fatal case of diphtheria, in these modern times.

"About the setting of the Pleiades, the wife of Meander, the blind man, spit from the first a PALE GREENISH MATTER, and soon after about the sixth day PURULENT. The LIVER SWELLED, and she had a little purging. What she spit was in small quantity, WHITE, BROAD, and like PURULENT FLESH. She had an aversion of food, and died about the twentieth day." (Coxe Epit. page 384.) This was written and probably occurred four hundred years before the Christian era, and would describe to-day the condition of very many cases of diphtheria in adults where there is no medical treatment.

There is no doubt that the physicians of the 16th, 17th and 18th centuries knew of this disease, since

epidemics prevailed in Europe, and were described by different physicians, under various names. These epidemics in Holland, 1557, in Madrid, Italy and France, 1576, were very fatal and have been minutely described by the physicians, co-temporaneous and cognizant of facts, symptoms and occurring in the periods named. Many of these names are suggestive of the extraordinary fatality and suffering attendant upon them, as follows:—*ULCUS ÆGYPTIACUM, VEL SYRIACUM, GARROTILLO, ANGINA SUFFOCTIVA, MORBUS SUFFOCANS VEL STRANGULATORIUS, ANGINA MALIGNA, ANGINA GANGRENOSA, CYNANCHE MALIGNA.*

But centuries before the time of Hippocrates an Indian writer had included in his "system of medicine," a description which is even more suggestive of diphtheria. The writer mentions a disease in which "an increase of phlegm and blood causes a swelling in the throat, characterized by panting and pain, destroying the vital organs, and incurable." He also says, "a large swelling in the throat, impeding food and drink, and marked by violent feverish symptoms, obstructing the passage of the breath, arising from phlegm combined with blood, is called 'closing of the throat.'"

It is possible that other diseases may have been confounded with our peculiar type, but the similarity of symptoms are in favor of the disease being well known and dreaded as early as the Sixteenth Century. In 1611, one Villa Real states that he has seen many times in patients, at the first outset of the disease, a white matter in the fauces, gullet and throat. He adds that the matter is of such a nature that if you stretch it with your hands it appears elastic, and has properties like those of wet leather—facts which he noticed by observing the matter coughed up by the living, but also by the examination of it in the dead.

We have descriptions of this disease existing in Spain, Italy and Sicily during the sixteenth and seventeenth centuries.

In 1821, M. Bretonneau of Tours laid the first treatise on the disease before the French Academy of Medicine. He was the originator of the term "Le Diphtherite" which has since been constantly retained. Epidemics of this disease in Europe have been frequent, and the causes are conceded to be unknown, while medical and hygienic treatment varies with different localities, and the different medical schools. The various views of Medical Authorities upon the infectiousness of the disease, and its causes would swell our little work to an enormous bulk. Dr. Morell Mackenzie says "the contagious principle has not been isolated although it probably consists of minute particles of matter, which are capable of floating in the atmosphere and attaching themselves to rough surfaces." Some agree that the contagious principle is in a minute fungus. Dr. Mackenzie also believes it to be dependent upon certain climatic and atmospheric conditions.

Many maintain that it is a blood poison primarily; the local manifestations coming afterwards; while others equally learned Continental medical men hold that diphtheria is a local disease at first, and the constitution becoming secondarily affected, or in other words that the poison from the throat is absorbed into the general system and produces a constitutional disturbance.

The defenders of this theory, claim to be supported by experimental inoculation of the diphtheritic poison into animals, and also from finding the lower forms of vegetation such as bacteria, micrococci, etc., in diphtheritic membranes and surrounding tissues, and also in the fluids and blood of persons suffering from diphtheria. In fact, they confidently assert that these vegetable forms may be produced by any decomposing membrane exposed to air and heat, and also from the well known fact, that the disease has occurred sporadically and alone, which could not have transpired if the germs were the primary cause.

The best authorities may be said to be unanimous in conceding that:

1. It is a disease which may be communicated by infection and contagion.

2. That, constitutional disturbances are always present, and form prominent symptoms.

3. That, there are generally marked sequences following each case of true diphtheria, prominently some forms of paralysis, deafness or ophthalmic affection.

4. That, although it may be epidemic, there is a much greater probability of diphtheria occurring sporadically (in single cases).

All of these propositions have been denied, and refuted one by one, by different medical investigators. Nor can we judge accurately of the different types or forms of this disease, unless we place ourselves in the position of the different writers, English, American, French or German.

In the "Nouveau Dictionnaire de Medicine," article diphtherite, (page 587) by Mons. Lepine, may be found a long list of eminent men who have devoted their talents to the study of this disease. Mons. Lepine quotes Trousseau as saying:—"LE RECONTRE DANS TOUS LES SAISONS, SOUS TOUS LES CLIMATE." ("It is found in all seasons under all climates.")

Indeed so common has the name diphtheria become that it is not an unfrequent error of writers to use the term for any exudation of the fauces. Thus Aitken, in his practice gives an account of it:—"diphtheria of the mouth is a pultaceous product of inflammation, in which the secretions of the mouth are greatly altered and increased." Also as a "sequela of measles." While in Vol. 1, page 514, he defines it as: "an acute, specific, general disease, which runs a quick and definite course in eight to fourteen days." He also claims that Washington died of this disease as did the Empress Josephine. • Other medical writers as Hutchinson and

Bouchat, declare that "ulcerative stomatis is in reality Buccal Diphtheria."

Dr. Samuel Bard, is claimed to be the first American writer upon the subject, and his essay is published in the Transaction, American Philos. Soc. Vol. 1. In point of fact, while doubtless each writer has contributed his share to the general knowledge, there is no one writer who seems to do more than to place the old facts in a new light, so far as discovering primal causes. A French writer (Bouchat) considers albumen in the urine "a sign of the commencement of prevalent infection," a symptom of great gravity, while another French authority (Lepine) does not think it of any practical importance. Mr. Wade (in the Lancet, 1862) makes the remark that after dissecting several bodies he revived the doctrine that diphtheria was an essential fever, while many other writers concur in the belief that there is very rarely a fever in a case of true diphtheria.

These appearances of irreconcilable differences of opinions, however, should not deter the thinker from drawing his own conclusions. For it is well known that membranous exudation is sometimes like CREAM, and others like, or similar to PUS, GRANULES, CORPUSCLES, oleo-protein, granules and epithelium, while a third patient may exhibit the most horribly offensive, putrefactive odor and complete gangrene of the tonsils and soft palate and yet all the different forms may be those of true diphtheria.

Dr. Jenner classes diphtheria in six forms:—"Mild, Inflammatory, Insidious, Nasal, Pseudo-Laryngeal, Asthenic." Others equally eminent, have two forms, Mild and Malignant.

The study of modern writers would lead one to suppose that the disease must be changed in different localities, and changed immensely, or else somebody must be wrong. Many medical writers claim that until 1857, the disease was not known in America, and then it was simultaneous in America and in England. In 1860 the first death occurred in Philadelphia, (Meigs and Pepper).

The following table shows the comparative rates of mortality from 1860 to 1864 in that city.

Years.	Scarlatina.	Croup.	Diphtheria.
1860	206	354	307
1861	329	304	502
1862	461	258	325
1863	275	444	434
1864	349	455	357



The Symptoms of Diphtheria.

CHAPTER II.

Diphtheria may commence with *slight chills* or, the patient may complain of *chilliness*, or *depression*. At other times *vomiting*, *diarrhea*, but in the West, the author is of the opinion that *loss of appetite* is the first definite symptom in the majority of cases. A *fetid breath* is a noticable *premonitory* symptom, and should not be neglected. *Slight difficulty of swallowing*; *swelling of cervical glands*, *hoarseness*, *uneasiness* in the *throat*, "mamma my neck aches" is sometimes the *primal* symptom of a fatal case. *Pain in the angles of the jaws*, a *swelling* of the *tonsils*, are all premonitory of the disease. Sleepiness, languor, and "tired," are the first things noticed by some parents, for it should be borne in mind, that the parent always sees the first symptoms. The physician seldom arriving until the patient is sick, and it may be remarked, that in the West, also, the doctor is not sent for until the patient is sick enough to go to bed and stay there.

Upon opening the mouth, the tonsils will appear red, inflamed, and soon the tonsils swell and become tumefied. The soft palate appears raised up, or puffed, and the characteristic *odor* of diphtheria can be detected. In a short time the pharynx, the soft palate or the tonsils, will show patches of small and white, or whitish gray exudations, or of a pale, greenish cast. These increasing, run together and become of a dirty, grayish yellow. The affection now spreads rapidly. The SPOTS show their true character as an EXUDATION of FALSE MEMBRANE. If this membrane be burned or cauterized

there will appear a red inflamed surface underneath ready to bleed, and if undisturbed, the membrane will be reproduced with great rapidity. It is the false membrane, which has been compared to a piece of wet vellum, or parchment, or washed leather which first gave the name of diphtheria to this disease, but this is by no means alike in all persons, for while the membrane on one person may acquire a *pale, green* cast, on others it will be YELLOWISH or GRAYISH WHITE, and in severe cases GANGRENOUS. In a short time, (if nothing effectual be done,) this false membrane covers the entire cavity of the mouth, the back of the throat, and fills the Posterior Nares. It is a very grave symptom when the nose bleeds, or when it becomes so filled with the exudation, that the air cannot be forced through the nostrils, yet all medical writers agree in having witnessed many with this symptom, recover.

Finally, this membrane appears to spread downward into the air passages, shortening the breath and creating a frightened look in the patient; and, it may also spread into the alimentary passage and continue to be SPIT UP. It has been stated that this membrane being decomposed causes the offensive breath; but in many instances coming under the writers' observation, *the offensive breath has been noticed many weeks previous to any symptoms of sore throat*. There is usually but little, if any fever; the tendency is always to *cold, clammy* hands and feet.

The cheeks appear to bloat. They are usually white, pallid although sometimes flushed temporarily. The power of shedding tears, appears to be lost at this period, and the neck is sometimes swelled to double its natural size. At other times it can be seen that other places upon the body (as the vulva and anus) have the membranous exudations, and often the entire reproductive organs of children seem to be covered with a humid exudation, accompanied with characteristic diphtheritic odor. The pulse grows small, urine scant, albuminous,

countenance pale and haggard, if child it will grow uneasy. "Papa, carry me on your shoulder." The membrane extends to the air passages, death ensues from Asphyxia, or from a collapse of exhausted nature.

Sometimes, under no treatment whatever, favorable symptoms occur; the membrane is cast off spontaneously; the appetite returns; the sleep becomes natural; the nostrils are relieved by blowing, (an act impossible while the posterior nares are filled up with the exudation,) and the patient recovers. The favorable symptoms to be watched for, is the ARREST OF THE MEMBRANOUS EXUDATION. When the patches begin to appear smaller, the disease may be considered checked.

The Larynx is, in grave cases affected, and the voice is lost. (Aphonia). Tweedie's Practice Vol. III., Art. Diphtheria, quotes Brettonneau, as asserting that all deaths from diphtheria could be attributed to the affections of the Larynx, or change in the air passages. These symptoms of diphtheria need not be confounded with QUINSY, TONSILLITIS, or PHARYNGITIS, although there may be an "exudation" in each of these diseases. They will be detected by other symptoms "which can only be made certain by a medical man." (Dr. Affleck in the Brit. Ency. Art. Diph.) This is said for the *doctor's benefit*. The fact is that any one who has ever seen a case of diphtheria is likely to be a good judge of the disease. Besides the history of the case is something. Swelled or inflamed tonsils are usually red and inflamed *over the entire surface* of the tonsils. Diphtheria shows *spotted places* over the back part of the throat.

A MARBLY PALLOR of the countenance denotes heart clots, or serious internal lesions. In regard to EXUDATION affecting the Larynx, and its immediate cause of death, there is a division of opinion. Dr. Jenner states that "exudation may and often does, extend into the stomach," nor can it be distinguished from the angina of scarlatina. "The commencement of the formation of the false membrane is in re-

ality an act of coagulation," (Page 515, Vol. I Aitkens' practice.) While another writer (Greenhow on diphtheria, N. Y. 1861,) states that "heart clots are found, or the heart is in a state of fatty degeneration. The exudation often extends into the structure of the lungs, which may be carnified. The kidneys may be filled with fibrinous casts." Though the symptoms given are those laid down in the books, and observed by the most eminent observers, yet as Meigs (Disease of children, page 617,) remarks that the disease in some cases is "strangely insidious." The condition of the patient may be fatal before being noticed. Heart clots may have formed. The uriniferous tubes may be closed permanently by the exudation before the condition of the patient is known, and a fatal result occurs before the little one is thought to be sick.

"The formation of coagulas in the cavities of the heart during life has been noticed in many conditions of the system; and this terrible, because almost necessarily fatal accident, is now always dreaded in the course of several diseases of which diphtheria is eminently one." (Meigs on children.)

Tanner, an eminent writer, is of the opinion that death arises, not from the exudation of the false membrane, but "from the deposition of fibrine in the heart."

This idea has recently been revived by W. C. Reiter, A. M., M. D. (monograph on diphtheria 1878,) who asserts that all the symptoms are due as well as the disease itself to an "excess of fibrin in the blood," which may be said to be a step in the advance of thought now about opening as to the causes. For, as will be shown hereafter, all SYMPTOMS DEPEND UPON THE CAUSE. And when we learn the cause we can proceed to understand and apply a knowledge of the symptoms of diphtheria to a rational scientific treatment. We shall no longer dwell upon two centuries of symptoms, but we shall apply ourselves directly to that cause which must exist.

Taking an Observation.

CHAPTER III.

Professor John William Draper, in the commencement of his admirable work on Physiology, makes the following premise: "For the maintenance of life three chemical conditions must be complied with. Man must be furnished with air, water and combustible matter."

In the process of investigation for the cause of a disease already so widely and intelligently discussed, it becomes a matter of curiosity to ascertain how far the researches of others have elucidated the truth, or how far they have been satisfied with their theories. We have at the outset of our study to find the CAUSES of:—

1. An "acute infectious disease." (See Enc. Brit. Art. Diphtheria by Dr. Affleck.)
2. An exudation of "false membrane" (?) its apparent "growth" or "extension," or rapid reproduction."
3. Grave constitutional disturbances.
4. Albumen in the urine. Fibrinous clots in the heart.
5. A peculiar or characteristic odor.

Previous to our circumscribing the task of eliminating the cause of diphtheria, let us place upon record decisions arrived at by two of the most eminent authorities of the civilized world.

"The influence of climate, weather and condition of soil, appear to be inappreciable." Brit. Ency. 9th Edition.

"In other words diphtheria belongs to the diseases which are distinguished nosologically as general or constitutional." Am. Cyclo. Art. Diphtheria.

Some authors have ascribed the cause to a local poison as propagated by contagion. (Brettonneau, Trousseau.) Others have declared that the infusoria, as BACTERIA MICROCOCCI, etc., were primary and sole causes. The constitutional symptoms however, have caused an advance in opinion during the last twenty years, and diphtheria, is now generally regarded as a constitutional disease, showing itself locally as well as constitutionally. Those who have taken in detail the subject and traced patiently the cause from a theory to a fact, are but a small proportion of the whole number. That diphtheria is caused by an excess of some albumenoid body being in an excess in the human organization, if we were to judge from the symptoms, would seem to be capable of demonstration. Eminent professors of medicine, have asserted that a "low electrical state of the atmosphere" was the greatest direct cause. (Maxon 1860.) Reiter, already quoted, thinks that "diphtheria is caused by an excess of fibrine in the blood." Unfortunately the Dr. while doubtless in a measure correct, that is so far as fibrine arising from starch, he does not state why the excess of fibrine is in the blood, nor where this "excess of fibrine" comes from; whether air, water or combustible matter.

It would have been more satisfactory if we knew what preceded the fibrine in the blood. We shall endeavor to prove that diphtheria is an excess of some changed secretions of the human organization, or is an albumenoid body combined with a protein compound, which if we are correct, will solve the problem of diphtheria. We shall also endeavor to show that some carbohydrate causes this excess of an albumenoid body, and finally we shall aim to name this carbohydrate as a common article of diet.

Church, an English professor, makes the statement that, "no complete chemical examination of the total constituents of a healthy human body had yet been made," consequently, while we are indebted to the par-

tial examinations of whole or normal bodies for a knowledge of their actions or constituents in health, we must be guided by analysis or observation of diseased bodies, for a knowledge of their actions and appearances in sickness. Perhaps we cannot do better than to examine at the present time, the principal places of the world where the disease we are now considering, is the most prevalent.

In the histories of the medical writers, we learn that on the continent of North America between 20 deg. North latitude and 60 deg. N., and between those latitudes in Europe, diphtheria has assumed its most fatal type. In America for the past nineteen years it has apparently migrated from place to place. In a warmer climate the disease changes until we reach Mexico, where it is unknown as a special disease. In the north above Canada we do not hear of diphtheria as climatic, or as a distinctive fatal disease, as we know of it in North America or in Europe. The food of the inhabitants of different countries is a matter of interest as well as the prevalence of a throat disease, which is so common in these latitudes, and so fatal.

Let us take a cursory glance at the foods eaten by the different nations. The humbler classes of China eat RICE as a principal article of diet. With their rice they drink tea. They eat Sea weed, and a sea bean. They smoke opium and in some cases use tobacco. Among the higher classes edible birds nests, eggs, chickens, the edible root of a water lily in the lake district, and preserved fruits form an important adjunct to a rice, bean and tea diet. Meat of hogs, rats and other animals are freely eaten when they can get them. Bamboo sprouts are boiled and eaten, so are mice, roaches, snails, slugs and many other foods. We have seen the Chinese, and while they may not be a tough, hardy race, they have a patience and industry that we envy as we certify to their temperance and investigate their habits. There is one disease they do not have. That is, they do not

have as we of North America, have it. That disease is diphtheria.

Japanese eat largely of wheat, rice and a gelose from a sea weed, dried fish, slugs, sharks' fins, sugar and they drink tea, coffee and wine. But with all this DIPHTHERIA is not a disease of Japan.

The Siamese have rice, beans, seeds of various sorts, ground nuts, betel nuts, sugar, spiced meats of various kinds, deer meat, fish, birds, mollusks, etc. They have quite a number of diseases, but we do not know of any disease in Siam which ever simulates diphtheria.

In the East Indies, rice is the principal food. Many tribes do not eat in the day. Some of them never taste meat. In some parts, fungi, oils, and spices seem to be a staple diet. Coffee and other stimulants are used as drinks; birds and fish are eaten; pepper and curry are freely used as condiments. They are addicted to opium and tobacco. But the East Indian has no special disease of the throat as we have it here, unless the sufferer be a servant, broken caste and lives on a diet similar to the Europeans. The European residents lose children in a large ratio of mortality, but in comparison to our cities of Boston, New York, Chicago and Philadelphia, there is very rarely a case of throat disease, as our true diphtheria of England or North America.

Africa, from Capetown to the Equator has a mixed race, boors, dutch settlers, and natives. Africans, in Africa do not have any diphtheria. Neither does diphtheria exist in Madagascar where they eat rice, snakes and cocoa nuts, the various fruits, fish, and get drunk on various strong liquors. Diseases they have, and enough of them, but diphtheria is unknown.

The Feejeeans have a somewhat varied diet. Cocoa nuts, bread, fruit, yams, human bodies, sharks, and fish of all kinds, plantains, terrapins and mollusks, and they drink three or four kinds of vile fermented liquors. Did any one ever hear of diphtheria in the Feejee Islands? So that if our amiable Mons. Lepine, will revise

his work, he can truthfully retract, "Sous tout les saisons, sous tou le climats." Under all seasons, and in all climates."

In South America, coffee is the principal and a constant article of drink. It is not only a pleasant stimulating beverage, but it is also a very important factor in the South American life. Dried beef, bread, yams, sweet potatoes, bananas and various fruits are the staples of daily food. South America does not know anything of diphtheria. Neither do children die of diphtheria in Mexico. (Many are killed by the bite of venomous snakes, tarantulas, etc.)

In Yucatan and Central America, the food consists of chickens, yams, indian corn meal, bananas, pine apples, rice with wine and coffee as drinks. But we never heard of a case of diphtheria in either of these two countries, unless the patient was a white child, and a native of the United States. In short, throat diseases are uncommon, and we believe our throat disease is unknown in Yucatan.

In Greenland the food is train-oil, blubber, bears' meat, warm blood, walrus flesh, seals and bones. Their drink is water, brandy or oil. We may not envy them or their habits, but we can say that if diphtheria did prevail there we should attribute it to their gross, coarse, and oleaginous food. Notwithstanding their vile diet they have no diphtheria.

The Indians of North America, live almost exclusively upon meats which is a "flesh former" or direct fibrin maker, and yet they fail to have the diphtheria, that is to any ones knowledge. If excess of fibrin causes disease why should not the Indians have had it who lived on fibrin for two hundred years?

Following out our idea, we look at Arabia, where camels' milk, dates, the flesh of goats are the staple factors of an Arab's diet. His coffee, spices and salt are very temperately indulged in. Will any traveler bear witness to a case of Arabic diphtheria? Arabic ophth-

almia we know. But no diphtheria, nor any throat disease which has the characteristic odor, or fetid putrefactive exudation as common in North America.

Where then is Diphtheria? In Europe, Holland, Spain, France, England. In North America above 20 degrees of latitude north, and below 60 degs. N. Here dwells the scourge, and in this area must we look for the cause, always bearing in mind the testimony before us. "Air and water have no appreciable influence." Climate none. Neither do the seasons. We must return to the consideration of the air, water and combustible material, (food) in England and America where the people were simultaneously attacked with diphtheria in 1857. Such is the testimony of medical writers.

The following is an English classification of daily combustible matter and it shows upon its face the vast differences in composition to the diet of the nations we have mentioned.

We believe the list is taken from a public institution but it does not change the fact that the articles are those which enter largely into the daily life of the English people.

"Classes of food taken by a healthy person, daily: (Church, Page 5, Art. food.) Bread 18 oz., butter 1 oz., milk 4 oz., bacon 2 oz., potatoes 8 oz., cabbage 6 oz., cheese $3\frac{1}{2}$ oz., sugar 1 oz., salt $\frac{3}{4}$ oz., water in tea or coffee or beer, $66\frac{1}{4}$ oz., weighing 6 lbs., $14\frac{1}{2}$ oz., that is to say a healthy person was supposed to live on this amount daily."

It now becomes an important question to ascertain in what respect the "combustible matter" taken into the human system (as food,) differs in the latitude named where the diphtheria exists from the countries where there is no diphtheria.

Evidently, bacon, meats, oils, butter, milk, rice, wheat, rye, barley, oranges, pine-apples, dates, figs, bananas, yams, bread-fruit, clams, fish, tea or coffee, wine or liquors, do not tend to produce the disease. Since by

examination into the countries where the natives eat these articles in excess, and live upon them, we do not find the disease. We have thus brought our examination down to the fact that the CAUSE lies in one or more of the combustible materials *used as food*, and that these combustible materials used as food and also the disease is between 20 degs. N. and 60 degs. North latitude.

If this cursory examination be correct we have advanced a step toward eliminating the primal cause, since latitude or climate, worse or better, hotter or colder, with more or less dryness or moisture, do not produce or cause the disease we are considering. Hence our first proposition—that diphtheria does not arise from climate or soil but from some article of diet, and that these articles of diet or food must be sought for in the same latitude where the disease exists, viz., North America and Europe.



About Exudation.

CHAPTER IV.

If the exudation peculiar to the disease now under consideration, were exclusively confined to the throat, it might be concluded that diphtheria is a throat disease. But we have already seen that it is not a fact, as the exudation is liable to appear upon any portion of the body, especially if the mucous surface be broken or abraded. The peculiar characteristics are the same wherever found, viz., rapid reproduction, and a tendency to putrefaction.

The rapid reproduction is explained, by stating that the cause or basis, or the excess, causing the exudation is the same in one portion of the body as another: and once an outlet for the escape of the effete body or material is found or opened, the Vital Power or Force sends the offending matter to the outlet.

The "false membrane" is explained, by assuming that the original basis was a material starchy, albumenous, or fibrinous, and upon exposure to the atmosphere it COAGULATES, this forming a continued coating simulating a "skin," or "wet vellum," a false membrane or diphtheria.

The tendency to putrefaction, which is always present, will be accounted for on the theory that the exudation is of an albumenoid nature, since "putrefaction is the spontaneous decomposition of albumenoid or proteine and gelatine compounds when exposed to a limited amount of air." But "all organized substances are decomposed in the atmosphere. When these do not contain nitrogen they are converted like wood, sugar and starch, into humus or a lower compound of carbon

and hydrogen, or into humic or ulmic acids," (Ure. Vol. 111, Page 527 et seq.)

If therefore the exudation is caused by any excess in the human economy, and that excess be an albumenoid, or a proteine and gelatine compound, the moment it is exposed to the air, it will putrefy. *As a fact, when the diphtheritic exudation is in view, putrefaction has commenced.*

Muspratt (Chemistry Vol. 1, Page 262), defines albumen as follows: The latest analysis of albumen leads to the empirical formula C 216. N 27. S 2. H 159. O 98, besides earthy and alkaline phosphates, without which it cannot exist.

"But how these are arranged is unknown." The exudation may not be strictly an albumenoid, or derived wholly from an albumen. Since we are not sufficiently positive as to the transformations of food in the system to decide how, or to describe the chemical changes necessary to change a carbo-hydrate into albumen or an albumenoid body. We do know that a carbo-hydrate can be changed in the animal economy, into a hydrocarbon, but we do not sufficiently understand the process. We will now trace in a general manner, the cause and nature of an exudation.

The VITAL POWER OR FORCE which controls the involuntary motions of the human economy calls, or makes known to the SENTIENT part of the bodies, the necessities for its well being. In other words, hunger, thirst, etc., are forced upon the mind. In Greenland, Kamachatka, and some parts of Northern Russia, the appetite demands train-oil, blubber, warm blood, candles, fats, and quantities of spirits. (Oils and fats are called *hydro-carbons*.) In those countries, the food named is useful, necessary, wished and demanded by the appetite, even of those who had always previously lived upon a varied or a vegetable diet. (See Kane's Arctic Regions, and Russian Travels.) No evil resulted from their continued use while living in an Arctic climate.

But when these articles of an Esquimaux diet or even when fat pork eaten by men in a warm climate or in the torrid zone it causes them "to die like sheep. A fatal disease carries them off in a few hours, and to every railroad tie laid, you may count four dead men." (History of the Panama Railroad.) Those living on the Equator need to eat fruit; on the contrary to live on fruits in the Arctic regions is impossible. The reason acknowledged by chemists and physiologists is because a greater heat of the body is necessary in the colder atmosphere of the North and this greater heat is gained by the combustion (i. e. digestion and calorification) of the oils and fats taken as food. In a temperate latitude among intelligent people, the diet is supposed to conform to the varied seasons and climates. Hence, we have buckwheat cakes in the winter, but not in the summer. Fruits, greens, vegetables and less meat in the summer, and "heartly victuals" in the winter. Butter or cream eaten in the summer will cause an eruption on children, if in excess to the requirements of the economy, or the demands of the growing body; and a writer suggests that "pimples on the face are coupons to buckwheat cakes." These eruptions can only arise when the combustible matters are not oxygenized or burned up in the body, and when they are in such an excess that the Vital Force throws the excess to the surface. Hence the pimples.

We will now examine the classes of food from whence an exudation through the mucous membrane is most commonly derived. Dr. Draper, than whom there is no higher physiological authority, makes the following classes. Human Physiology, 1870, page 28.

1st. Carbo-hydrates, or compounds in which carbon is united with hydrogen and oxygen, their proportion being that for forming water; starch, sugar, gum, cellulose are examples.

2d. Hydro-carbons, compounds containing unoxxygenized hydrogen, as oils, fats and alcohol.

3d. Albuminous bodies. These contain nitrogen, albumen, fibrin, casein, are examples.

4th. Salts, any classification of food articles which does not contain this group is imperfect; for salts are not only absolutely essential to organic processes, but also to the construction of many tissues. As an example of the former case the chloride of sodium may be mentioned, and of the latter, the phosphate of lime."

Let us look at these classes and examine which one it is necessary for us to select as a cause of diphtheritic exudation.

We must select an "albumenoid," because we have to account for "putrefaction" and "albumen in the urine" which are symptoms in diphtheria.

Also a carbo-hydrate to account for the toughness of the "false membrane" always present in diphtheria.

We reject the hydro-carbons as factors in the true diphtheritic exudation, and also salts, as we have already seen that fats eaten to excess in high latitudes fail to produce diphtheria or exudations of fauces, putrefactive and tough. This is because they are easily oxydized or burned in the body. Let us carefully examine the position at this time.

WHERE IT IS.

North America from 20 degrees north to 60 north latitude.

In Europe from 63 degs. north latitude to 18 degs. north latitude.

In the Northern States, above 28 degs. it is most fatal.

In New England, New York and Pennsylvania and the western States especially.

WHERE IT IS NOT.

China, Siam, East Indies (see exceptions, page 13.)

Islands of the Pacific, Patagonia, Brazil, South America (except Peru), Africa, Mexico, Central America, Yucatan and above the latitude of 60 degs. north.

A LIST OF FOOD, SOME OF
WHICH MUST BE FACTORS
OF DIPHTHERIA.

Apples, cherries, berries, pears, plums, grapes, cabbage, beets, carrots, cauliflower, melons, tomatoes, wheat, rye, barley, buckwheat, Indian corn, artichokes, arrow root, sorghum, potatoes, pumpkins, squash, radishes, spinach, cheese, milk, eggs, fish, oysters, and clams are indicated as being the food common to our required latitudes, and some of which must be the factors of diphtheria.

A LIST OF CLASSES OF FOOD
NOT PRODUCING DIPHTH-
ERIA.

All fruits of the tropics.

Oranges, olives, bannanas, pawpaws, pine apples, figs, yams, dates, persimmons, tamarinds, etc. All sugars and rice. All meats. For the most greedy flesh eaters in the world are free from the throat disease. Alcohol, liquors, oils, fats, acids, condiments, tea, coffee, tobacco, opium and hasheesh, however detrimental an effect they may have in other respects upon the body and mind, can not be producers of diphtheria.

Of these named, apples, cherries, berries, pears, plums, grapes, tomatoes, sorghum, radishes, Indian corn, spinach, melons artichokes, and arrow root must be dismissed from the list, as children have been known to have and die of diphtheria who never ate them, never saw them. We have left, cabbage, beets, carrots, cauliflower, wheat, rye, barley, buckwheat, potatoes, cheese, milk, eggs, fish and oysters.

From which of this list shall we select that most probable, if eaten to excess, to produce an albumenoid?

Eggs, milk and cheese.

We must add a carbo-hydrate. Potatoes, buckwheat, barley, rye and wheat.

Gelatin—Fish and oysters.

It becomes a matter of interest to learn whether this would agree with the food commonly eaten in the latitudes already named.

Upon what are these diphtheritic children fed who die so fast in America of the disease diphtheria?

They are fed upon wheaten bread, a little meat, a great many potatoes and abundance of pastry, containing cooked milk and eggs.

If the reader agrees he will decide that the "albumenoid body" is found in the food named, which comprise always the food upon which the diphtheritic patient lived.

But we must throw out eggs and milk, as these articles are staples of food where there is no diphtheria.

We must exclude *meat*, as meat by itself has never produced diphtheria.

Milk as the factor of diphtheria must be excluded, since milk drinkers in other countries than America do not have the peculiar disease diphtheria.

Pastry, (which may be defined as poisonous compounds of sour milk, rancid butter or the cell destroying lard, combined with the usual brain-rotting baking powder and superfine flour sweetened with corn starch and sulphuric acid which are components of American sugar) must be thrown out from our list, since many children in the west as well as in the New England states have been known to die of diphtheria who were not fed upon much pastry, and we are reduced to

THE IRISH POTATO!

Objections to this mode of solving the problem of a disease may be replied to by stating that disease is from some cause. The cause exists in some one of three conditions: Air, water or a combustible material as food.

The food must be used to an excess to produce this exudation, and grave constitutional disturbance.

The food must be in the latitude of diphtheria, and when found must be proved to be capable of producing the symptoms and conditions necessary to the disease. One article of diet may not be able to produce this disease any more than charcoal or nitre produces gunpowder. But one article of food may be a necessary factor to the

disease; and it may be that it could not exist without said any more than gunpowder can be produced without one of its constituents. Diphtheria is not a bird to fly down one's throat. It is a condition of the system. We contend that this condition is brought about by an excess of one or more kinds of food. That this food must be common wherever the diphtheria prevails, and must be as common an article of food as diphtheria is common as a disease. Moreover, it *must be of itself* capable of having *all the innate properties*, which, when used as a food *in excess* will account for all the symptoms and all the differences of the disease which we call diphtheria.

Here it is proper to meet another objection which has been stated, viz: that if potatoes caused diphtheria why did not some one find it out before now? The reply is this.

Persons who believe potatoes are a good food, usually have read very little. Doctors and Physiologists may recognize a fact, but it may not be profitable for them to be exposed to the popular clamor. Beside too many physicians of every school have never paid any attention to the causes produced by changes of food, and they do not know and do not care.

But wiser men than the writer have noted that different kinds of food produced different diseases and among other great observers of human life we produce Hippocrates as an example; 400 years before Christ he wrote:

"Those who came from Ænus who ate leguminous food, whether men or women, became infirm in their legs and so remained. And those who ate vetches and tares complained of pains in the knees." (Coxe Epitome) which may be understood as indicating that those who ate such food in excess were ones who suffered.

Although Hippocrates did not tell us why those vetch eaters complained of pains in the knees, we pre-

sume no one would deny that there was *an active principle* in the vetches *causing* the "pains in the knees" of the people eating them.

Why then should we not decide that those who eat potatoes in excess are subject to diphtheria, and those who do not eat potatoes never have the diphtheria, never have any exudation of false membrane; never that "acute specific disease" which is so dreaded and so fatal. The time when we should not assert that this article of diet when eaten in excess is a producer of diphtheria is when we learn of a case of diphtheria in a person who does not use potatoes as food: and, as previously asserted, the reason why they do not always produce the disease is because they are not always used to an excess or because of other peculiar conditions of the system which we shall shortly discuss.



Facts About Causes.

CHAPTER V.

If we examine the food, habits, air and surroundings of different nations or individuals who have national or local diseases, we shall find that every disease is produced by a specific cause and it is *to this cause* that the malady may be rightly attributed. Goitre is an example.

All diseases are certain conditions of the animal, or mental organization, and these conditions have a cause for their existence.

The eruptive diseases, as measles, scarlatina, small pox, etc., are caused by a direct contact with a specific poison, each following out its own laws of incubation and all other peculiarities well understood by the medical profession.

Diphtheria, typhus fever, scurvy, and a very large class of other diseases, are conditions of the system produced by the air, water or food not being in accordance with the natural laws to preserve health.

No condition, simulating diphtheria has ever been produced by air or water, however putrid or bad, unless there was grave constitutional disturbances caused by the combustible matter taken as food. Please put a pin here.

The cause of diphtheria and the specific contagion of scarlet fever and diphtheria which we find described as "Malignant Scarlet fever and Putrid Sore Throat," in 1825, (New England Journal) was probably because the people of New England *fed their children largely on the Irish Potato*. (And the writer begs to impress on the reader's mind the fact that the *sweet potato of Louisiana* and the Southern States never produces any

disease as *diphtheria*. Moreover the negroes of the south who live on *sweet potatoes* with occasionally an opossum or a coon never have that peculiar throat disease now under consideration.)

The sweet potato contains sugar enough to render it a wholesome and nutritious article of food.

The same causes which produce typhus fever (foul air and poisoned water,) joined with the cause which produces diphtheria, will cause typhus fever and diphtheria combined, provided the food is wrong as well as the water or air.

Thus it will be seen that any disease or condition may be joined with diphtheria and produce modifications or combinations of the disease which we call diphtheria provided the other adjuncts are in a suitable condition in addition to this wrong or diphtheritic food.

This proposition that some diseases are caused by food, others by malarial influences, or miasmatic air and impure water, is not original or recent; it is reproduced now to oppose the idea that a disease can exist without a cause. The exudation of diphtheria has a cause. This cause exists where the diphtheria prevails.

It cannot be water or air, since there may be only one diphtheritic person in a family, which could not occur if air or water was the cause. The other requisite of man's existence is combustible material. The food used is the combustible material we must examine.

If we examine the food used in diphtheritic latitudes which differ from others in latitudes where there is seldom or never a case of diphtheria, we shall find the Irish potato as the distinctive food. The one eaten in excess.

Should we examine the food eaten to excess in localities where the diphtheria is most prevalent and fatal, we shall decide that potato is the food of all others eaten as a continuous article of diet.

If we are more particular in the examination of every case of diphtheria, we shall find that in every case of

diphtheria, which appears sporadically, we have an excessive and a continuous eater of potatoes.

If we examine our previous conclusions drawn from the putrefactive tendency of the exudation, we must conclude that the albumenoid body in excess, and forming the basis or cause of the exudation and rapid reproduction of the false membrane, was acquired from food. That food was milk, eggs, bread, fish, meats, pastry and potatoes, principally and continuously, potatoes.

The continuous and excessive use of eggs or milk as a diet for children will predispose to or cause croup, and this fact is unknown to many writers. The fact should be drilled into every parent's head that an excess of albuminous food (Eggs especially), causes that death producing Membraneous Croup. The *croupous* form of diphtheria is where the child has been an egg eater as well as a potato eater, and it is to be noted that this form of diphtheria is very generally fatal.

In bringing our facts to bear upon a cause, we have not forgotten that we have condemned the Irish potato as the food causing diphtheria and it becomes a duty to examine this most common article of diet.

Potato, which is a name from the Spanish of "batata" (a sweet potato) is a tuber of the root of the *Solanum tuberosum* and being of the family *Solanaceae*, is classed with tobacco, stramonium, henbane, belladonna, etc. The potato was a wild plant of South America and was probably early introduced into Spain from Quito, although nearly all the writers attribute its introduction into Europe to Sir Walter Raleigh in 1586, from the colony of Virginia.

It is asserted that the main value of the potato as a food lies in its being full of *starch cells*.

The following table showing the constituents of different kinds of potatoes is from Ure's Dictionary, page 743.

	Starch	Fibrous Parenchyma	Vegetable Albumen.	Gum Sugar Salts.	Water.
Red Potato	15.0	7.0	1.4	9.2	75.0
Germinating	15.6	6.8	1.5	3.7	73.0
Kidney	9.1	8.8	0.8	—	81.3
Large Red	12.9	6.0	0.7	—	78.0
Sweet (?)	15.1	8.0	0.8	—	74.3
Peruvian	15.0	5.2	1.9	1.0	76.0
English	12.9	6.6	1.1	1.7	77.5
Parisian	13.3	6.8	0.9	4.8	73.2

Vegetable fibrin is composed of that portion of cereal plants which is insoluble in alcohol.

According to Pohl the starch in a potato whose specific gravity is 1.123 amounts to 24.14, or very near one fourth of starch. In the potato whose specific gravity is 1.090 the percentage of starch is 16.38 or about one sixth of the substance. According to Letheby the starch is 18 per cent. and Payer says 20 per cent.

In the animal economy when a food is eaten the next step is digestion. And directly at this point we desire to rise and, as it were, speak out in meeting, to the effect that if we were endeavoring to write a book worthy of the attention of the wise medical men of this country we should try and hunt out all the large words to which they are accustomed. But as this work is for parents, careful fathers and loving mothers, we are trying to make our meaning as plain as possible *to save the children*. We therefore try to write plainly.

Digestion then is the next process after eating. To digest starch requires an acid. This acid comes from the saliva, from pancreatic fluid and from intestinal fluid. Dalton says: (page 60.) "The contact of human saliva or the intestinal juices at 100 degs. F. rapidly transforms hydrated (hydrated means watered) starch into sugar. This transformation is arrested in the stomach by the action of the gastric juice, but as soon as the pancreatic juice is brought in contact the process of turning the starch into sugar is resumed to be completed in the intestines." Dalton (page 175) asserts

that "The pancreatic juice has the power of transforming starch into sugar. This action takes place with great rapidity at the temperature of the living body."

Kirke, page 347 says: "The starchy or amyloid portions of the food, the conversion of which into dextrine and sugar was more or less interrupted during its stay in the stomach is now acted upon briskly by the pancreatic juice and the **succus entericus*, and the sugar as it is formed is dissolved in the intestinal fluids, and is absorbed chiefly by the blood vessels." If these authorities are correct, it is the acid in the pancreatic juice and the intestinal fluids that transforms the starch into sugar. And if these organs do not contain the acid, the starch of the potato remains unchanged in the system, and this is the fact that explains the cause of diphtheria; the cause of *American catarrh* and the cause of certain weaknesses in women.

Let any parent think that the food containing one-fourth pure starch requires a certain amount of acid to transform it into dextrine and another certain amount of the same acid to transform the dextrine into sugar. It, the starch, this potato starch must be transformed before it can be assimilated. The starch, after daily weekly, monthly calling or demanding more acid to digest or transform it into sugar, comes to a day in which the pancreas replies "no acid to spare, no acid on hand because no acids have been furnished the body."

What then? The starch remains starch and is passed into the system as starch cells, and the Potato Eater is filled with undigested starch. It must have an outlet. It goes to the liver as glycogen, animal starch. It goes to the lymphatics as lymph, impure starchy lymph. It passes into the heart as starchy atoms. Through the lungs as starchy atoms, and clogs the pores of the skin with starchy atoms, fills up the nose so that the children of a larger growth have a foul discharge they call

**Succus Entericus.* The fluid copiously secreted from the lining membrane of the small intestines.

catarrh. Catarrh! Why, catarrh is the name for this nose and throat discharge of undigested starch. One day this discharge comes to the surface in the throat and when nature throws it to the surface we call it exudation. Bacteria and micrococci hatch in it and breed and it becomes "horribly offensive." The undigested starch goes into the kidneys and comes out "ALBUMEN IN THE URINE. It forms a ball in the heart and is called HEART CLOT. This starch undigested is spit up, burned off and "rapidly reproduced," because the entire body is filled with undigested starch. A writer (Reiter) says diphtheria is caused by Fibrin. He should have said potato starch. The peculiar tenacity of the false membrane is due to its starchy basis. "Fibrin has been analyzed by a great many chemists, the results have not been sufficiently in accordance to lead to the conclusion that it is a homogenous substance. It appears to vary in composition according to the source from which it is obtained." (Watt's Chemistry.) The potato is the diphtheritic factor, because it is the only factor that contains one-fourth starch and neutralizes all the principall acids of the body.

The first objection that strikes the average boarder is "oh! look at the Irish; they live on potatoes." Yes, they do, but they eat a nitrogenous substance called cabbage; they boil them together in fact, and call it Kol Cannon. They also drink buttermilk which contains an acid, but the children in New England and the West are not so fortunate as the Irish, as they are fed upon pork gravy, biscuit and sweet milk, and because they do not get acid enough, the starch is undigested and diphtheria follows. Even the peculiar characteristic odor of diphtheria can be traced to the starch of potato (see Dalton, page 57.) "The starch obtained from the potato, however carefully prepared, retains in connection with it traces of an odiferous principle which makes it less valuable for culinary purposes than many other varieties."

Nor do these statements conflict with the statement that the diphtheria or a disease similar to diphtheria existed B. C. 400? Excesses of certain kinds of food were as liable to produce disease at that time, as now. Even the Israelites ate too much of a certain kind of food and became sick. Putrid food and filthy air and water produces typhus fever. The Greeks may have lived upon one article of food until that food or the constituents of the food were in excess in the body. Hence when the wife of the blind man became sick she spit up an exudation, the liver swelled, (Hippocrates) and she died the twentieth day—about the time a robust person would have died of diphtheria, and if her liver swelled she had an excess of glycogen—animal starch—and she had been eating an excess of starchy food and did not have acid enough to transform the starch into sugar. Although rather late to hazard a suggestion, yet, if in our opinion, Hippocrates had dosed the blind man's wife with acid enough to transform all the starch into sugar, she would have recovered.

As Menander's wife knew nothing of the carbo-hydrate potato, (which was not introduced into England until 1586, although known in Europe some years before,) we may decide that, if a disease similar to diphtheria existed 2400 years ago it was then, as now, caused by an excess of starchy food, since it would not alter the general symptoms of an exudation, or grave constitutional disturbance provided the starch, vegetable-albumen, and the fibrous parenchyma were in similar proportions to our potatoes, and were eaten to an excess. It is the continuous diet upon one article and that article a starch, that causes the liver to swell, the grave constitutional disturbances to be present, and causes also, a condition of the blood which precedes swelling of the glands, and a transudation of coagulable material that is called an exudation.

In a work published in London 1862, the Dr. Pavy proved that a diet upon vegetables increased the animal

starch in the liver from 7 to 17 per cent. and that the weight of the liver is greatly increased by a diet of starchy foods or a diet of meal, bread and potatoes. While the person or animal eating meat or tripe has very much less animal starch, and the liver weighs less. Persons or animals fasting have the animal starch reduced to a minimum.

The entire argument against the Irish potato as a food is because it contains a peculiar starch. And even if the writer would acknowledge that potato is a healthy food, which he strenuously denies, then the necessity for acid to transform that starch into dextrine and sugar exists, and that acid is finally used up by the excesses of starch and the undigested starch remains in the body to cause catarrh in the grown person and diphtheria in the children, and the reason, and the only one adduced by any writer now on earth that will stand criticism, *why* one child has the diphtheria and another does not, is because one child has more acid in its body than the other. And it will be found in a family where three children have died out of five, that the two living children were more fond of acids and the three dead were more fond of sweets. Starch with an acid, turns to sugar.

No one knows from experience better than the writer how distressing it is to break off these food habits, but my dear father and mother, you may depend upon it, that as long as your child is an eater of Irish potatoes it will be in danger of the diphtheria.

These are facts, possibly new to you, but they will bear your closest scrutiny. Possibly you did not know that if a person takes brandy to an excess, the red nose is designated as a "brandy nose."

The clay eaters of North Carolina are protuberant in the abdomen, and are nicknamed "clay bellies."

An animal fed exclusively upon any one diet is liable to die of inanition. If a bird be fed upon oil, the oil will finally exude through the skin and feathers,

and the bird will die from lack of proper nourishment.

When a persons eats an excess of sugar, or sacharine matters, there is an excess of urine.

An excess of starchy food with a fried compound, causes an exudation in the form of pimples on the face.

Apples, containing any appreciable quantity of acid, if eaten to an excess will produce an excoriating, watery and itching exudation upon the surface. An excess of cider will cause sore eyes.

One of the reasons why the diphtheritic exudations appear oftener on growing children may be because the liver is larger in proportion than in adults, and because they consume more starchy foods; and because they cannot so readily assimilate these starchy foods as adults on account of the deficiency of saliva, and pancreatic and intestinal fluids containing acids; and without which the starch remains undigested in the body, a cause of disease.

The names of Egypt and Syria are suggestive of the origin of some of these diseases. In absence of any testimony we may suppose that the *Malum Egyptiacum* was an Egyptian malady and produced by some excess of a food, specially attributed to Egypt, caused by some disease or structural change of the grain raised in that country, and that grain may have been the barley or hordeum which contains 70 per cent. of starch, in which case the peculiar throat disease called diphtheria now and then called *Malum Egyptiacum* was produced by an excessive and continuous use of starchy food without a sufficient acid in the body to transform that starch into sugar.

In the same manner we should account for the excessive and fatal cases of diphtheria in and around Odessa, Russia, where many thousands "died of diphtheria." It was not in any sense a disease of water or air, but of food, as the principal food was barley bread containing an excess of starch, and a continued diet upon

this or any other starchy food deranges the entire system and ends in disease. If however they had eaten an acid of a nature suitable to assist in transforming the starch into sugar these Odessa diphtheritic patients would have recovered or there would have been no diphtheria.

This fact also accounts for the special fatality of the disease in some families. Some mothers use soda in bread, in biscuits and in all kinds of cakes. They also use a BAKING POWDER which is composed of dry alkali (potassa or soda) with a dry acid. But the basis of all these baking powders is an ALKALI. These alkalies when taken into the stomach as food, neutralize the natural acidity of the intestinal fluids and render them still less able to perform their task of transforming starch into sugar. And the time comes when nature, demanding a settlement for having disarranged her fluids, secreted for the purpose of digesting this starch, turns on the alkali eater and gives him as a penalty for broken laws *undigested starch!* and then it is that undigested starch in excess, causes the fatality of the children.

It is this change and variety of food that causes all the difference in the symptoms of different cases. The difference in the different types of diphtheria is because of the age of the child, the liver is larger in proportion and because the length of time the child has eaten the starchy food, and the quantity of acid it has swallowed governs the state of the body and the quantity of undigested material in the body.

Thus, we may be assured that if a child drank lemonade each night it could not have the potato starch disease, diphtheria, as severely as the child whose supper was composed of soda biscuits and milk from a cow drinking an alkaline water, because the lemonade being acid turns some of the starch into sugar.

I remember that the most eminent lawyer in the city of Lincoln told me that my theory of diphtheria would

not hold in Crete, Saline Co., Nebraska. I visited that city and went personally to many houses where they had had diphtheria and it had been fatal. The reason WHY, did not appear plain and I was much puzzled. I am indebted to Mr. Calkins, of Pleasant Hill for calling my attention to the proper cause of the difference in mortality among the children. In Crete and in many places the water from the wells is alkaline, more so in some wells than in others. In proportion as the water is alkaline so are the fatal cases of diphtheria. And this is because the alkalinity of the water destroys or neutralizes the natural acids of the body, thus rendering the drinkers of water that is alkaline more easy victims of starch food than those who drink water nearly pure.

One of the reasons why the New England people have lost children with diphtheria is because of their universal use of soda in their cookery. Soda in their doughnuts, in their cakes, cookies and goodies of all sorts; and the reason why rice eaters of Africa and the East Indies do not suffer with diphtheria, is because the rice eaters have no soda to use, and they eat acid fruits, thus furnishing an abundance of acid to transform the starch of rice into sugar. In addition to this the potato has a different kind of a starch cell from rice; of course to many persons starch is starch, but the potato starch is inferior to all others. There is also a difference in the amount of fat in the articles eaten, thus: The absolute quantity of fat in 100 parts of potato is only eleven one-hundredths, according to Payen, while in barley it is 2.76 per cent. and in rice the fatty material is .07. The difference in the quantity of fat and the size of the starch granules could make very little appreciable difference in a healthy body, but in a body weakened by an excess of starch undigested, these differences would account for many differences in the symptoms of various observers of the same disease.

It would seem needless to multiply instances of the

effect of food upon the body, especially of children, or to state that improper food produces or becomes a factor of disease, yet, there are hundreds of good people who eat pork, potatoes, soda biscuits, vile pastry made with a poisonous baking powder, and wonder that their children are sick. And the doctors, the great and wise, the pompous, self assured regulars, who write volumes of learned stuff about the symptoms and appearances of the body after death, have not a word to say in relation to the food that is constantly producing these insidious diseases. For a fact of this kind examine the profuse work of Morrell Mackenzie of London, and in fact all the medical writers up to date.

Every one in the west is aware that it is a very difficult matter to raise a child upon milk given by cows which drink a salt or alkaline water, or on milk from cows fed on grass grown on alkali soil, yet this has never been published, and the new comers into Kansas and Nebraska, lose a child or two before they find it out. It is most probable that the casein of the milk forms an albumenoid body that clogs up the action of the liver and kidneys. And possibly the reason is as we have before stated the *alkali* neutralizes the natural *acids* of the intestines.

In the writer's experience, the excess of Irish potatoes used as food has always preceded a case of diphtheria. But effects of an excess of food consisting of eggs, pastry (cooked with eggs, milk, fat, an unknown baking powder) are in some respects to be equally dreaded as an excess of potatoes. Why it is so the writer has endeavored to explain. Underneath all experiences, there is a law, which, if understood would bring the facts into harmony with results. Why a rapid "reproduction of membrane" should obtain in the human subject that has been a voracious potato eater is perhaps not as satisfactorily demonstrated as we could wish at this date, but neither could it be absolutely proved how, or why a *Bovista giganteum*, a puff ball,

can in a single night, develop from a mere point to a size that contains over fifty thousand millions of cells, (Draper, Page 88) but it is according to a natural, chemical, physical and physiological law, and it is a FACT. And the facts exists. And diphtheria is a fact. The fetid breath, horribly offensive, rapid growth of exudation (development of cells in the villi,) death from apparent blood poison, or asphyxia, is another solemn and a heart-breaking fact.



Foundation Facts.

CHAPTER VI.

Let us now examine the disease under consideration, from a more comprehensive standpoint.

When there is not a case of this disease within a radius of ten miles, a child of six years goes out to play. It comes in tired and wet. Perhaps it has a nap on the lounge. It wakes up and puts on the clothes and goes out again. At supper it appears flushed and tired. It has "caught a cold." It sleeps all night. The next morning it is feverish. It eats some breakfast. But it desires to keep quiet. It has a bad cold.

The next day through the child is not well. It is dumpish, fretful, possibly stupid and sleepy. It is uneasy during the next night. The *next morning*, after thirty-six hours have elapsed, the mother or the physician discovers a patch of diphtheritic matter on the tonsil. The educated or experienced eye declares this spot is a symptom of DIPHTHERIA.

The day passes. Remedies have been given. Possibly the diphtheritic patch has come off or is loose. Or the mucus patch has turned to a gray color or brown. The nose fills up. The odor becomes offensive. All night the parents hope the child is better. It is now a bad case of diphtheria. The appetite is gone. The child is sleeping and surely it is better. Morning again arrives. The pinched nose, the purple lips, the white face, the labored breathing, the putrefactive odor, the displaced eyes have but one signification. Death comes during the forenoon to relieve the struggles of the child who unfortunately had "caught a bad cold" but died of MALIGNANT DIPHTHERIA.

What is DIPHTHERIA?

A girl of nine years has decided that she will take a long walk during a cold morning. She is not sufficiently clad. She takes cold. She is chilled. The mother gives her some domestic dose. She sleeps. She is better. The next morning there are patches on the throat.

A physician is called. He says DIPHTHERIA.

He uses his remedies. Gargles, atomisers, pork rind around the throat. Sulphur. Lime water. Kerosene. Potash. The throat appears better. The odor, so fearful a little while ago is gone. She sleeps. She must be better. She has a choking spell in the night. The doctor is called. *She has a heart clot.* In an hour she is dead.

Little Tommy, who kissed his sister good-bye, when she was dying, is taken sick four days afterwards. His throat is sore. His neck is swelled. He breathes hard. He is all right though. But his nose stops up. They cauterize the throat. They force stuff—permanganate of potash—chlorate of potash—carbolic acid—bromine—perchloride of iron—hydrochloric acid—eucalyptus, salicylic acid—turpentine, camphor—through the nostrils down the throat. It is better. The child always appears better. But the appetite does not come back. It looks badly and in two days they lay the little boy beside his little sister in the grave-yard.

Ten days afterwards two of the children are taken down with "sore throat." The parents are now alarmed.

Another doctor from a distant place is sent for. He counsels. Perhaps he does. Perhaps he does not.

His treatment differs. But the cases are bad, very bad. The mother is worn out with watching and anxiety but the good christian neighbors will not enter the house because it certainly is contagious. No doubt of it. And the christianity of these dear neighbors begins at home (and ends there often-times). Another child is sick. The house is afflicted. More doctors. Two other children die. The mother slowly recovers and the last

child dies. Died from diphtheria caught from *exposure* to diphtheritic contagion.

What makes diphtheria?

Why does it come first from a bad cold. Why does it spread its contagion all through the school room?

We know that it is contagious. A comparatively speaking, perfectly healthy child will "catch diphtheria" and die with it.

We knew—yes we knew of a school teacher, a lady who had a sore throat. She has muffled up and taught because she could not afford to lose the pay or hire a substitute—one little girl went home and "died of diphtheria." There were eleven other cases which recovered. Many persons believe that there is a specific diphtheritic germ (bacteria, micrococci, vibriones) or something that can be breathed in and poisons the system. We do not doubt it. There must be a specific poison in diphtheria, but why and how does it come in the first place, when there is no contagion to be found, and there is not a diphtheritic case within a hundred miles?

Is there no way by which one can be sure of keeping their children from diphtheria? Say reasonably—sure?

We assert that there is a way that one may be sure that their children cannot get—cannot take—cannot have diphtheria and if, from the most intimate contagion they take it, it need not become a fatal or dangerous disease. Do we know what we are talking about? We think we do. Mistakes happen. We may be mistaken, but we feel as positive of the facts which we place before you as we feel positive that the pen traces each letter.

Many individuals pick up a shell on the ocean beach and suppose they have the entire ocean. Others bring home a fragment of lava from Vesuvius and think the entire mountain of fire comes with them. The writer knows that he has only a fragment of knowledge of diphtheria, but it is a genuine fragment, and when you get it you can answer, "I KNOW SOMETHING ABOUT DIPH-

THERIA." To commence properly, we desire to lay down a few planks which must be agreed upon by every one.

FIRST we lay down the broad proposition that:

You cannot make something out of nothing.

SECOND, that if one eats a degraded class of food or drinks degraded water or breathes degraded air, one must expect to have degraded blood, tissues and formed material.

The word "*degraded*" is used here to express a low, filthy, polluted, putrid, unfit class of FOODS.

It is also used to denote and describe a dirty, vile polluted bacteria swarming WATER.

It is also used to express foul, polluted, re-breathed or smoky air.

What we desire to state, is the fact that one cannot expect to have a good, sound, healthy body, and at the same time eat polluted, degraded food—drink the vile rotten water and breathe the horrible air one finds in many places in a city or in the country where they hate to ventilate. Read this over again so as to get this idea in your head.

We desire you to take plenty of time to have this idea well established. Decide whether it is true or not.

Last summer a man had some hogs. The hogs had the cholera and except one, all died. The one that lived was fattened and the man sent half of the fat hog to his brother. At the present writing (December, 1887,) some have died and all the rest are sick with a disease akin to cholera. Degraded and impure food made or produced this disease and the deaths followed.

It is publicly asserted that the tobacco users in Greeley's Arctic expedition succumbed to cold and disease quicker than those who did not use tobacco. Why? Because the use of tobacco degrades, kills or weakens the molecules or bioplasm of the body.

It is a well known and authenticated fact that persons who continually sleep in a room lighted by a kero-

sene lamp, after a while have a bronchial trouble and go into a decline. Why? Because the lamp destroys or vitiates, or degrades, or poisons the air, so that it cannot be used with good effect by the lungs. Moreover the smoke from the kerosene lamp destroys the tissues of the lungs.

It is well known that persons who drink water from wells which are the recipients of cess pools, or wells which have the settlings of the barn yard or the hog lot are those who suffer from a typhoid fever which is often fatal. Why? Because this degraded water is detrimental to the body or poisons the body and THE BODY, not remaining in a state of health, because it does not have the necessary elements to keep it in health, BECOMES AS THE ELEMENTS GIVEN IT.

In other words:

The human body has no power of itself, in itself, to make rotten choleric hog meat into good, sound flesh and BLOOD.

The human body has no power to build up good wholesome fluids from poison, degraded or polluted water.

The human body has no power of itself, in itself, and by itself, to purify degraded rotten air, after the air is in the lungs.

Hence we return to our first proposition. *You cannot make something out of nothing.*

Now to particularize.

Irish potatoes cannot make good blood, good tissue, good formed material, good bones, good brain material or good teeth. They *can* make a degraded FAT and can supply HEAT, but they are a degraded low class of excessively starchy food.

Pork cannot by any physiological change be made into a sound wholesome, muscle, tissue, blood, bone or brain. Sound or rotten, well or sick, the hog is an unfit article of food. If you think this is true, all right. If you love the hog and believe in the hog and eat the hog, we have not the time now to attend to your case.

Wait a little until we look over our pickle barrel, and we will see you later.

Any person who drinks an impure water, whether from an unfiltered rotten cistern as a surface cess pool, well or MELTED ICE from a stagnant lake, cannot expect to have sound blood. Having now laid down these few planks to stand upon, we will commence to examine the bearings of these truths.

Yesterday morning the child was well. Last night it had "*taken cold.*" This morning the child has a FETID breath, a quick breath, SWELLING of the neck glands, a sore throat and it is pronounced DIPHTHERIA, a "CONTAGIOUS DISEASE."

What has occurred?

Let us suppose a different case. A child was suddenly killed by being run over, yesterday afternoon. It was laid out last night. The temperature was up to 99 degrees Fahrenheit. This morning the child's body is bloated or swelled. To-night it will be worse bloated and an offensive odor will issue which they tell us is DECOMPOSITION.

Now let us side by side place these two cases—one a sudden death—one a case of "a contagious disease."

The two Examples.

Morning.
Child well.

Morning.
Child well.

Twelve Hours Later.

The child has been run over. Is
dead. Laid out.

Child has taken cold, is feverish,
Goes to bed.

Twelve Hours Later.

Body bloated. Discolored.
Slight odor. Temperature 99 de-
grees F.

Child's neck swelled, sore throat.
Feverish. Diphtheria. Odor
commencing.

Twelve Hours Later.

Body much discolored. More
bloated. Very Offensive. Odor
dangerous to health.

Child has more swelling, more
sore throat,—voice lost. Odor
very offensive, very contagious.

In both cases something has occurred—1—to destroy vitality,—2, to allow the chemical forces to work and (3) to liberate or to form an offensive odor.

In the first case we say that life has gone out of the body and chemical forces are at work.

In the second place, we say a “contagious disease” has taken the child.

Let us return a moment to our first line of thought.

Vitiated and degraded food builds up vitiated and degraded tissue. The hog, coffee, potato or degraded filthy water is certain to build up a body of degraded elements.

Let us now make a different suggestion.

Of one hundred children who were out yesterday fifteen took cold.

Only two have the DIPHTHERIA. Four have the CROUP, one has LUNG FEVER. One has PLEURISY, seven have BAD COLDS.

There must have existed some particular reason why only so few who take cold have the diphtheria.

There must be an especial reason, why, of the thousands of people who take the severest of colds every winter, there should be so very few who have the diphtheria as directly arising from the cold.

Let us examine this. The child of the age of four to fourteen is the one who is liable to have the DIPHTHERIA as produced from a cold.

When this one child has the diphtheria as arising from cold—another one may have the croup—one or two the lung fever—and another one the pleurisy and eight times as many have “*bad colds*.”

The child who takes this diphtheria from cold is one of the *apparently* same kind of children who caught a bad cold and there is nothing more of it.

The child run over and killed was the same kind of a child as any of the other children. Yet when dead, it became decomposed, bloated and had a putrid odor—because the life or vital power was out of it and the

chemical law took possession of the body.

We think this is the KEY that unlocks the secret of the CAUSE OF DIPHThERIA.

The dead child in a warm temperature, swells or bloats and emits a putrid odor. The live child with a cold bloats, swells in the face and bloats (especially in the neck glands) and emits an offensive odor.

Is anything dead in the live child? Let us see.

Degraded or vitiated food, water or air can not but build up inferior, degraded and vitiated muscle tissue and formed material.

Degraded tissue is not firm, is liable to be unsound and is weakened.

This weakened, vitiated, degraded and inferior tissue or FORMED MATERIAL is not as capable of resisting the enemies of life as hardy tissue built up from good sound material.

Hence when this vitiated, weakened, degraded and inferior tissue is EXPOSED TO COLD, that vitiated and inferior tissue, unable to resist the cold, DIES, and we have in the body of the child DEAD TISSUE, DEAD FORMED MATERIAL.

It does not concern us so much as to where this DEAD TISSUE is, although we know that the death of this degraded or vitiated tissue must commence either in the capillaries of the skin or the lymphatic glands—as to know what becomes of this dead tissue.

We know first that it is thrown into the general circulation and of course goes to the liver, the heart and the lungs. It is absorbed or taken up by the glandular system and the lymphatic glands of the neck swell.

As the temperature of the body is about 99 degrees Fahrenheit, this dead material (degraded vitiated tissue) soon *putrefies*. The diphtheritic odor has commenced.

As in the case of the run over and dead child, so in the case of the child whose vitiated and degraded tissue is killed by cold, chemical action, HEAT soon putrefies

it and the vital force or the natural effort of the body is to expel or throw this dead matter off and out of the system, and hence we have the efforts of the glands to exude this poisonous, degraded and dead tissue and we have the exudation in the throat especially from the tonsils. The cervical glands are full and yet nature tries to take this dead and poisonous material out of the general circulation and the neck glands are crowded full. They are swelled up.

Putrefaction takes place in from twelve or twenty-four hours. Decomposition has taken place in the living body. *It is now a contagious disease*, because of the putrefaction of the degraded elements under the heat of the body has formed nests for the micrococci and bacteria and the breath from this diphtheritic child is now capable of inoculating other children or grown persons *who have degraded, vitiated or inferior tissue in their body.*

But mark this point. If a person does not have degraded, vitiated or inferior tissue in the body, they can not take the poison of diphtheria.

Here we will explain the conditions of the one hundred children.

Fifteen took cold, possibly from being improperly washed and because they were thinly clad, or from a sudden change of temperature clogging the skin.

Two of these fifteen take diphtheria *because* they have vitiated and degraded tissue built up from degraded food.

Four may have the CROUP because their bodies contain excesses of ALBUMEN from EGGS, or casein from excesses of MILK.

One has *lung fever*, because it has slept in a smoky room or breathed the gas from a burning kerosene lamp at night.

One has the pleurisy from some constitutional defect or from keeping the mouth open in the cold atmosphere.

The others have "*bad colds*" because the skin is clogged from the lack of bathing and improper clothing.

Others who had been exposed to *bad air*, *sewer gas*, *compost heaps*, or slept in illy ventilated rooms could have dated their initial of TYPHOID FEVER from an afternoon's exposure to the cold with sopping wet feet.

Thus we may trace, from this cold exposure after being in a heated room, pneumonia, pleurisy, croup, a bad cold and diphtheria, but the difference in these diseases—while they may start from the same initial point cold—can be alone attributed to the differences in the constitution of the children. And these assertions are not made upon theory but are of such a nature that one may verify them in any of the winter months.

One man may stand in a wet stable during an auction of horses and return home at night with all the prodromic symptoms of typhoid fever. The man who stood next to him may have an attack of DIPHTHERIA while twenty men in the same place the same length of time will not be visibly affected. Why is this? Because of the conditions of the tissues of the body.

This also fully explains the reason of the apparent certain contagiousness of diphtheria to some persons and the apparent freedom from contagion of others. The cause does not lie in the contagion which is in every case contagious (for we hold that the putrefactive odor is contagious and poison as soon as there is the slightest odor and the more offensive the odor the more dangerous the contagion,) but in the susceptibility of the person who breathes that contagion—whether he or she has degraded, vitiated, inferior, weakened formed material, or sound and healthy formed material of the body.

The reader can now decide, who have the diphtheria. No one can have this disease except those who already have the vitiated tissue in the body. No one is liable to have diphtheria who is well fed or rather who is cleanly fed, properly bathed and warmly clad. But no

one who has been fed upon the degraded elements of pork, coffee, potato, half turned milk or who has drank rotten cistern water or lived in a smoky room is free from danger.

From the preceding lines of thought the reader will be able to judge of many other remote, but direct causes of the condition of body needed not alone to produce diphtheria, but many other diseases of an apparent kindred nature.

Take for example, TONSILLITIS, or inflammation of the *tonsils*.

There is certainly a depraved condition of body and the entire system if one can have *continued* tonsillitis, although any one who keeps the mouth open for ever so short a time in a dusty room or a car full of gas or a musty cellar, or near decaying garbage might have inflammation of the tonsils for a short time.

But inflammation is dry, red, irritated, sore and burning, and usually there is no offensive breath. But mark this: when the exudation commences the case is no longer tonsillitis. It is most certainly diphtheria, whether in a malignant or mild form will be determined afterwards.

So also the disease CATARRH. This is most assuredly derived from an excess of undigested or non-assimilated starchy food in the body. The body may be otherwise free from disease but this excess of a starch food as of potatoes especially and of albuminous excesses as of eggs, pastry and also from milk, (casein,) unassimilated or undigested, render the daily exudation of these particles a nuisance. Now add to this exudation from the nasal passages, the fungi, the microbes and dust generally and one can have a most persistent and chronic catarrh, which all the doctors in Christendom cannot cure unless the cause lying in these excesses of starchy albumenous or gelatinous food be removed.

Of all the foods eaten in the civilized world to-day none are filthier than the HOG and no persons are

exempt from any diseases who touch the hog as food. Just as bad is the LARD in pastry and the LARD in bread. We have neither patience nor time to argue or beg the eaters of hog to deny themselves of such villainous food. The hog is a prime source of depraved blood.

THE WHITES or LEUCHORRHEA, is another disease which is directly produced from the depraved and vitiated elements in the system.

Can this disease be cured? Certainly. Easily by proper food. But never can it be cured while the women are drinkers of tea and eaters of the starchy potato and the abominable hog.

It will not be out of place to remark that many of these suffering women expect to recover at once when they leave off eating the causes of disease. But this is not reasonable. They must shun the causes and eat the articles which will tend to restore the secretions to the natural condition. That is, avoid meat as a staple diet, and take fruit, bread and drink water instead of tea, coffee, cocoa or chocolate.

There is a peculiar SORE THROAT which apparently comes from a bronchial irritation. I allude to what is termed CLERGYMAN'S SORE THROAT. This condition often comes up because of sexual excesses and is only mentioned here because there are those who do not think out the *cause* of differing diseases and we feel certain that if the reader will examine the evidence on these lines of thought there will be new and fresh evidence of the plainness of the natural law and how to avoid many of these distressing conditions of the body.

Is Diphtheria Contagious.

CHAPTER VII.

We have no hesitation in saying that any case of diphtheria is contagious as a poison. We may go further and assert, as has already been asserted that the germs of diphtheria are capable of breeding again, and innoculating other persons. All this is acknowledged. But that any cleanly, healthy person should be afraid of diphtheria, we deny. We acknowledge the contagiousness of diphtheria to those persons whose bodies are already in a vitiated, degraded state. But we assert most confidently that those persons who have been cleanly in their food, drink and those who have kept the body cleanly, need never fear the contagiousness of diphtheria.

The following has been published and re-published and is now a portion of American literature on diphtheria. The place was in Northern Vermont.

"In the fourth school district of the township of Newark, amidst the steep hills, where reside a quiet people in comfortable dwellings, the summer term of school was opened in May. Among the twenty-two little children who assembled in the schoolroom were two who had suffered from a mild attack of diphtheria in April, and one of them was, at the time school opened, suffering badly from what appeared to have been a relapse in the form of diphtheritic ophthalmia. Besides, it is proved that these recently sick pupils had not been well cleansed, one of them having on an unwashed garment that she had worn in all her sickness, three weeks previously. At the end of the third day of school, several of the children were complaining of sore throat, headache, and dizziness, and on the fourth day and evening so many were sick in the same way that the teacher and officers announced the school temporarily

closed. By the end of the sixth day from school opening, sixteen of the twenty-two previously healthy children became seriously sick with symptoms of malignant diphtheria, and some already dying. The teacher and six pupils were not attacked, nor have they since suffered from the disease."

The above is a "*National Health Bulletin*," No. 1, published by the National Board of Health, allopathic of course. It shows in a most conclusive manner that they did not attach so very much importance to cleanliness and that as to the origin of diphtheria, they knew absolutely nothing.

Let us see what the above narrative does mean.

We may infer that the ideas of the promulgators of the "*National Health Bulletin*" were that this "unwashed garment" carried the germs of the disease and thus reproduced the diphtheria. But such is not our entire idea. The other school children must have been in a condition to take the disease, or they would not have had it.

We find first, that, notwithstanding the assertion of the National Board of Health, that there dwelt "in the steep hills a quiet people in comfortable dwellings" these people did not wash either themselves, their children, nor their childrens' garments, and as we happen to know something of these quiet people in comfortable dwellings," we can further state that the POTATO, the coffee and the HOG were the principle foods on which they fed their children.

If now to the filthiness of unwashed children, one will continually stuff them with hog meat, hog fat, hog pastry and the starchy potato, why under the sun should they not have the diphtheria and have it contagious? They did have it. And, as sixteen had this diphtheria, and the teacher and six pupils did not have it, may it not reasonably be supposed that there was a cause WHY sixteen did have it and six did not have it? We think so.

The ones that lived in a family of "quiet people in

comfortable dwellings," who did NOT wash an undergarment once in three weeks or longer were the first; the other sixteen followed.

We naturally would suppose the teacher to be the cleanest and as she and six of the other pupils did not have it, we think the six who did not have it, were possibly those who kept clean, and did not contain so much vitiated, inferior, weakened and degraded formed material.

This corresponds with our idea of the CAUSES of DIPHTHERIA, and it corresponds with our idea of its contagiousness.

We believe that milk can be a source of diphtheria, and if the body is in a condition to take this contagion, the milk can become a carrier of diphtheria. In diphtheritic epidemics stop the milk.

Only the past winter we knew of two deaths of children where the only possible source of *contagion* was the milk, and we knew of others, quite a number, who had the diphtheria where this milkman delivered milk. But in all these cases, we think the probability was that the blood had become vitiated, degraded and weakened before the milk was used.

Pepper's system of medicine (Jacobi) states the following:—

"Diphtheria in a large family of children, living in one of the best houses of the city, after having returned half a dozen times in the course of a year, disappeared instantaneously, not to return, when a seamstress living in an infected neighborhood and suffering from occasional sore throats was relieved of her daily work in the house."

In this case we could state most positively that these children must have had very susceptible bodies. But we do not desire to abate a jot of the terror which this disease should create. Our object is to get at the truth. It is a christian act to assist one's neighbors. There is no christianity in exposing your own children to a disease born of filth.

If, therefore, one is free from diseased milk, rotten water, pork, coffee, and potato food, diphtheria is not contagious.

If one lives on these vile protoplasmic materials, diphtheria is in the highest degree contagious. We go further and assert that if one has these degraded elements in the body the diphtheria is liable to catch one even if there were no contagion within a thousand miles.

It may be asserted that the contagion from diphtheria is no worse than the scents from any other rotten material. As no one could stay in a room with a putrefying corpse, so no one can remain in a room where protoplasmic elements or dead and degraded formed material is in a state of putrefaction. But as will be seen in our treatment all this can be speedily eliminated in two or three hours. And let one ask themselves whether in the case of any disease it is not a DUTY to do towards others as we would be done by if we were in their places.

Contagion is admitted, but we deny wholly that diphtheria is contagious to one whose blood is pure, clean and sweet.



The Treatment.

CHAPTER VIII.

The numberless remedies and treatments for diphtheria will not be introduced in this chapter, nor in the book. We have no time. We do not care anything about them. We have tried very many of them and have seen others tried and fail.

We invite your attention to a treatment that does not fail. We place before you a class of most certain remedies that are at enmity with death. We urge you to get the principles of this treatment well established in your brain and you are prepared to save every case not already struck with death. EVERY CASE. We know of no such word as fail with this treatment, and we cannot conceive of any case dying of diphtheria where this treatment is carried out.

We have seen some bad cases. Throat swelled; patients purple and nostrils closed and solid. They lived. Before we had this treatment we called in *counsel* and all such "cases died."

We have seen "allopaths," "homœopaths," "botanics" try, and while some have been, and may be in some cases successful, yet the great majority of malignant cases of diphtheria die.

Never have we feared since we first commenced this treatment, and never a case lost. We have taken the babe at the breast and the head of the family, the bread winner, and each case rapidly recovered.

We have had a family very bad and sent the medicine, because we have been so crowded we could not personally attend, but the directions followed, and this treatment brought them all through to life and health.

We do not place it before the readers as an untried theory, although the theory of its cure is absolutely correct. This theory may be said to be combined in two words, STIMULATION and ELIMINATION.

The remedies used are all vegetable and all safe. Not one poisonous article is used and not a dangerous article is advised. We do not advise any reader to solicit cases which are already killed by the poison giving allopathic physician, but we advise every parent to take the children at once out of the professional care of any allopathic doctor and doctor them personally. We say this treatment is as certain of curing diphtheria as it is certain that we have described the disease.

Our first step is to procure a good COMPOSITION.

Composition is made as follows:—

Bayberry Bark pulverized, one fourth pound.

Pleurisy Root “ one fourth pound.

Ginger Root “ one fourth pound.

Prickly Ash Bark “ one ounce.

Capsicum “ one drachm.

Mix these together and you have COMPOSITION.

Of this take one heaping desert spoonful, and place in a pitcher, and turn on one pint of boiling water.

Call this tea the No. 1.

For the second have a handful of raspberry leaves, and make one pint of infusion of these leaves. Call this the No. 2.

Have one heaping desert spoonful of the coarsely ground herb of lobelia, and make one pint of this by turning on boiling water.

You have now three infusions of about one pint each.

If the patient is a child of five to eight years of age, this is enough. If the patient is fourteen to eighteen, you may need twice as much.

Now make two quarts of thin corn meal gruel.

Good gruel should be made as follows:

Have four quarts of boiling water on the stove in a clean kettle.

Wet a cup of SIFTED CORN MEAL in cold water. Stir this wetted corn meal slowly into the boiling water and stir with a wooden spoon constantly. When it has boiled hard ten minutes, set it on the back of the stove and let it remain warm and covered for twenty-five minutes longer. Then salt it to suit your taste. It needs to be quite salty.

With these three infusions and the gruel you are now able to conquer every case of malignant diphtheria that is alive and some that are apparently in the very jaws of death.

The first thing is stimulation and also strength.

For a child of ten give half or one-third cup of composition strained through a fine strainer and pleasantly sweetened. Next give half a cup of or a half a cup warm thin gruel. Let these follow one another quickly.

No matter how sore the throat is, how dry, how tender, how much closed up, that little drink of composition makes it better. The gruel follows and sheathes the parts over nicely.

Do you use a gargle?—not a bit. If a gargle is wanted use the composition, but we do not think any gargle is called for. We are in to cure that case of diphtheria and that right speedy.

In five minutes or less, another half or third of a cup of raspberry leaf tea (No. 2) is given.

Now notice that the throat is better already, if you look down, and you have bettered the throat, the patches on the throat have probably gone down the stomach. Give another dose of composition tea and gruel in five or ten minutes more. Make it half or one third of a cupful, and see that it is well sweetened and clearly strained. In five minutes after a good cupful of raspberry leaf and more gruel. Be certain to have them warm, and not too warm, but nice to the taste. Taste of each tea and each cupful of gruel yourself. See how it tastes to you.

These eight cups of liquids, four of medicines stimulant and astringent and four of gruel have cleaned off the throat wonderfully. Oh, it is sure, certain and safe.

You do not need to say that the little one cannot drink it. You are the parent guardian or doctor. The child will be readily induced to drink a little sweetened tea, and it so readily clears off the throat that no sensible child will refuse to take the medicine after the first or second dose is given. I speak from experience, and that is an experience that has been successful. More than this, the child readily enters into the spirit of the proceeding as soon as it feels it is better.

For a younger child the dose may be reduced to a dessert spoonful instead of a half cupful, and if the person is older the dose can be increased to a cupful of each tea.

So far we have stimulated and sustained the strength. Now carefully observe, if the patient is warm all over.

This is important. Feel of the feet, the hands and the bowels.

If they are NOT WARM, you may put bottles of water to the feet. Or if the bowels have not moved, you should prepare an injection of CATNIP TEA. Put two ounces of catnip into two quarts of boiling water and steep ten minutes. *Do not boil it.* Let it steep covered.

Strain this through a cloth, and give it as an injection to the bowels. If it does not promote a good movement, add half a cup of strained composition tea. Get a good action of the bowels.

When the child gets up to use the chamber, have a piece of carpet or rug for it to put the feet on, and a blanket to throw over its shoulders. Repeat the injection if the bowels do not move good. Perhaps one might wait an hour if the second injection does not act. But this depends upon the case, and also some on the previous condition of the patient.

The condition desired is STIMULATION. And when this condition is obtained elimination is the next step.

The reader will see that the third cup is an infusion of lobelia herb. Every since the days of Samuel Thompson, the allopaths have persistently asserted that lobelia is a poison. But the allopaths are liars, and God has cursed them for their lies. Your infusion of lobelia is as harmless as an infusion of Chinese tea. More so in fact because one can get a great many diseases, drinking tea that one could not get if they drank an infusion of lobelia leaf.

Roberts Bartholow, of Philadelphia, classes lobelia between TOBACCO and HYDROCYANIC ACID as a "MOTOR DEPRESSANT."

But Roberts Bartholow, of Philadelphia, is a liar. Lobelia is no more like tobacco or hydrocyanic acid than milk is like bilge water and he knew it when he wrote it. The idea of the allopath is to have the people as ignorant as possible, and so they lie about the action of medicines, or pretend they do not know of them. Do not be afraid of the lobelia tea or think it can kill your child. It will do it good if given properly and we are urging you to have the child warm for this next step.

But we will suppose you are too much afraid to give lobelia. Can we go on with this treatment successfully without it? Yes indeed. No theory is worth a button that cannot use any materials in its reach. Lobelia is a pure RELAXANT. Any other relaxant will answer.

Instead of lobelia use the same amount of boneset or eupatorium perfoliatum or as it is sometimes called, THOROUGHWORT.

You have continued the composition and raspberry teas with gruel until the throat is cleared off and the diphtheritic patient is warm.

Now give half a cup of the No. 3 tea whether it is lobelia, boneset or snake root. *Virginia snake root* or *seneca snake root* will produce a relaxing effect and

will answer our purpose. Only give it and follow with a cup of gruel.

The probabilities are that the little one vomits at once, but it may not and will not if the throat is very much closed up and the patches are very adherent. Give more composition and more gruel and repeat the raspberry leaf tea. Give the gruel in tablespoonful doses. If the child does not vomit, it will be because it is not warm enough. Make the composition a little stronger, and continue to give it every ten minutes. If the face is flushed, you can now give another dose of lobelia tea, and vomiting will ensue freely.

But if you take the case from an allopathic physician or from any one who has been using alcohol and hydrochloric acid *do not give the lobelia until you are sure* the child is warm.

Continue the doses of composition and raspberry leaf until three or four hours have elapsed, or until you are certain that you have not their poisons to contend with.

After the first three cups, you may be assured of your success by examining the throat. It will surprise you to see how the patches of diphtheria have gone off and how clean the throat has become. If in addition you can give lobelia enough to have a thorough emetic *your child is safe*.

Not but what you must continue, but you may rest assured that if the child vomits, there is not but very little danger of its recovery from that time.

After vomiting, give the composition, half cupful for a child of ten years, or a dessert spoonful for a child of one or two years, every half hour or oftener.

Or if the child is much better it can be allowed to sleep an hour.

But mark this SLEEPINESS, in *this disease* is an almost fatal symptom. Do not allow the patient to sleep unless directly after it has vomited. And then wake it up every half hour and give the composition tea, and the raspberry leaf tea.

In case these teas do not seem strong enough, we would, and have used a clear tea of bayberry bark, made as we have before stated, one ounce to a pint of boiling water.

Having gotten rid of the throat exudation, which you surely will, we now advise a further elimination by the bowels, provided the tongue has cleaned off very fairly.

But if the tongue is loaded and coated—if there is any odor about the breath, continue your composition and raspberry leaf tea every ten or twenty minutes until the tongue has cleared off and the throat is cleaned. You can do it with the proper medicines, and these medicines will certainly prove to you, that they are proper medicines to stimulate the secretions and to assist in eliminating the *dead matter* already in the body.

In some cases *pennyroyal* (HEDEOMA PUGELOIDES) may be used instead of composition. Spearmint tea is another excellent stimulant. After the patient has been stimulated, so that the effete, worn out, degraded and dead material is in the stomach, the emetic is the sure and certain and safe elimination from the stomach. But when the stomach is once cleaned out, then the elimination by the bowels is safe.

One ounce of coarsely ground CULVERS' ROOT.

(“LEPTANDRA VIRGINICA.”)

twenty grains of capsicum—mix—put in one pint cold soft water and boil hard ten minutes. Strain. Sweeten. Give warm to a child of ten. One tablespoonful every four hours.

While you give this medicine for the bowels, continue the composition and raspberry leaf tea every half hour.

There is another combination which is an excellent depurator. It is composed of

Wild Cherry Bark

Rhubarb,

Prickly Ash Berries,

Pleurisy Root,

Culvers' Root,

Anise Seed.

Equal parts by weight. Mix them intimately together and make an infusion by turning a cupful of boiling water onto a heaping teaspoonful. Steep an hour. It is better given warm. The dose, for a ten year old child, should be one wine glassful, or three large spoonfuls every third hour, until the discharges of the bowels are *yellow*. After that give the same dose or more at night, until the recovery is complete or the bowels are in good order. This dose can be increased if needed.

All infusions and decoctions should be strained through a clean cloth or a very fine strainer, and sweetened to suit the taste.

We might stop to argue the point about using these infusions or decoctions in place of having a written prescription filled from the drug store, but we will allow the parent or interested friend to decide who would be liable to do best for the patient—a drugstore clerk or one who feels a vital interest in the welfare of the patient. A prettily labeled bottle is of no use in a case of malignant diphtheria.

(Beside this, no fluid extract nor any tincture or alcoholic or glycerined preparation can ever fully and wholly represent the medicinal qualities of herbs or barks as well as a simple infusion or a decoction. We believe that these tinctures are not as readily assimilated as infusions. And nature cannot use a tincture as well as an infusion, although you can succeed by using the tinctures, if you are prejudiced against infusions, but they will not do the work as rapidly.

In regard to giving either one or any other physic, we assert that *there should not be a dose of physic given* under any circumstances until the throat has cleaned off.

How long will it take to clean this throat off?

This depends upon the malignancy of the disease, and your faithfulness. We clean the throat off and reduce the swelling of the tonsils and clear the nose out in two hours. Can you do it? Yes! certainly.

The very moment the first dose of composition goes down there is a change for the better. When that dose of raspberry leaf tea passes down the throat, great spaces of the membrane are *killed as diphtheritic poison patches*. We know this. The BAYBERRY is a wonderful *agent*. It cleans off the membrane; it destroys the odor, it stimulates the mucous follicles to throw off this exudation; it destroys the bacteria and diphtheritic germs in the throat and mouth, and is a great and efficient CLEANER of the whole mucous tract from the throat to the stomach. Bayberry is antiseptic as well as healing.

The GINGER and CAPSICUM in the composition are the best stimulants on the earth, and they stimulate while the bayberry infusion rolls them together and peels them off, leaving the mucous membrane free to heal up underneath the diphtheritic patches.

In some cases that we have been called to during the winter of 1887 and 1888, one emetic alone cured a very severe case.

In three others the composition and raspberry leaf teas cured them without an emetic. A child one year of age was cured with composition and raspberry leaf tea alone.

In a case of membranous croup complicated with diphtheria, we made just a single tea of one teaspoonful of composition and half a teaspoonful of coarsely ground lobelia herb to a coffee cup full of boiling water. The dose was a tablespoonful every fifteen minutes. It did not vomit much, but it was better in its breathing before the second dose was given. It had a little vomiting at the fourth dose and the time was lengthened between the doses to twenty minutes, and still longer as it became easier. It recovered in two days, but the voice was yet weak. The lobelia was omitted and the Cherry and Rhubarb given. It fully recovered.

There is a most common and fatal mistake made in cases of malignant diphtheria against the making of

which we desire most earnestly to caution the interested parties. This mistake is in supposing that SLEEP in malignant diphtheria is a GOOD SYMPTOM.

IT IS NOT SO. As long as the nostrils are stopped up or there are patches on the throat or the throat is shut up or the child breathes rattling or croupy, the sleep is the sleep from SEPTIC MATERIAL or from DIPHTHERITIC POISON which is stupefying the brain. Don't forget it.

The stupid, soggy sleep is not a good symptom but a very dangerous symptom. The child will wake up and be struck with death.

No matter what time it is, no matter what has been done, if you desire to see the child live, commence on this stimulating treatment and get the stimulants in the stomach and clear out the throat thoroughly before allowing one hours sleep.

And even then, if the patient has rattling or choking wake it up again and give it the doses of composition and Raspberry leaf tea or Bayberry tea until you know the throat and nose are clean and the patient is visibly better. Then you may allow one to three hours sleep. This is important. Fight the enemy while you can see it. Keep the intestinal tract stimulated.

The very moment the patient moves or wakes, (after you have given the cleaning doses and the emetic, or the teas to clean out the throat and allowed it to go to sleep for an hour,) then get it up and make it gargle with a mouthful of composition and another to swallow and a spoonful or more of Raspberry leaf tea. If the rattling and choking again commences, do you commence the stimulating teas and the occasional dose of Lobelia leaf tea until you have the patient vomit thoroughly once, twice or three times.

You may be told that this emetic weakens your patient. This is not true.

The strength is sustained by the corn meal gruel and you can give in the intervals crust coffee or lemonade if there is any thirst. No hearty food should be allowed

as long as the tonsils are white or the nose is stopped. You cannot afford any foolishness in this matter and you cannot afford to stop the dosing until that throat is absolutely clean. By your teas and gruel without weakening the patient you can clean the throat in two or three hours. What we desire to impress on your mind is that it does not take a month, a week, or a day to do this cleaning of the throat, but you can do it just as readily in two hours as you can in two days. You need to understand that no old fool hen should be there to bother you with suggestions of "Beef Broth," "Brandy" and "Egg Nogg" to sustain the strength. Nature demands help. By giving a stimulant you ASSIST NATURE.

We do not believe in alcohol, as we know that alcohol leaves the patient weaker and also weakens the heart and the nervous system. We do not believe in alcohol because it weakens and destroys the kidneys. But alcohol is the best stimulant the allopaths have and if you choose that kind of treatment we can assure you that alcohol is better than any other treatment the old school ever had.

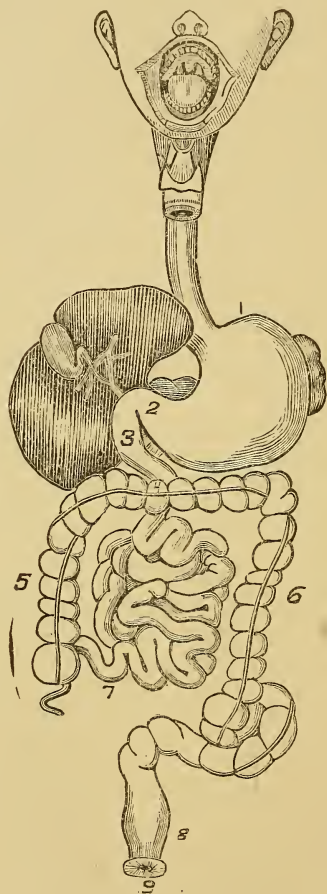
But if you desire to rapidly and safely cure the child of this disease you must act intelligently about it.

What do you want to do? CLEAN THAT BODY.

You desire to cleanse the body of some vitiated material. You desire to get rid of that dead material which is putrefying in the body. And we assure you there is no other method of getting this dead material out of the system except by STIMULATION. This can be done at once and also done rapidly. One good stimulating emetic is worth all the other treatments in the world. But the emetic depends upon the stimulant and astringing remedies given at first.

We do not know any thing better than composition. But any stimulant will do it, that can be relied upon to stimulate the secretions. Thus Catnip, Pennyroyal, Motherwort, Canada Snake Root and above the Golden Rod, make excellent agents and may be relied upon as stimulants.

DIAGRAM OF INTESTINAL TRACT.



1 THE CARDIAC PORTION OF THE STOMACH. 2 PYLORUS. 3 DUODENUM OR SECOND STOMACH. 4 TRANSVERSE COLON. 5 ASCENDING COLON. 6 DESCENDING COLON. 7 SMALL INTESTINES. 8 RECTUM. 9 ANUS.

Nothing in our practice has so soon peeled off the throat as an infusion of Bayberry bark. But there are others that will do it safely and surely as Hemlock, Beth root, Geranium, Virginia Snake Root, all harmless remedies. Those remedies assist nature to cast off the dead and poisonous materials. If you have the cause of this disease in your understanding no one can rattle you as to the proper treatment.

But if you believe as many ignorant people do believe, that "DISEASE IS A POISON" and you have to give a poison, to overcome the inward disease which is a poison, and if you believe that the poison you give must be a stronger poison than the poison of the disease, then you are quite likely to lose your child or have it irretrievably ruined by some poison dosing animal that you may trust as a Doctor.

You do not ever need a poison. Your object is to assist nature to throw off and expel this vitiated, weakened, degraded, and dead material that is in the body and by doing this you assist the body to recover its health, and surely cure every case of Diphtheria not already struck with death.

When one opens the mouth and sees the throat white with canker, the idea is that this is a THROAT DISEASE. But this a far more serious disease than if it was wholly confined to the throat. The entire body is diseased. The throat shows the membrane because the contact of dead material to the air, hastens and provokes putrefaction.

The membrane is the exudation in a putrefied state.

By a moment's reflection one will see that all the intestinal tract is involved in this exudation.

One can also see that all the witnesses who assert that they have seen the diphtheritic membrane on the anus and the privates of children, are correct. The exudation when it comes to the surface putrefies and it is the diphtheritic membrane.

When any one asserts that "diphtheria is just a

bunch of worms or germs in the throat and all we have to do is to kill those worms," that person shows his ignorance.

And when a "doctor" gets up and tells us that he has "put fat pork around the neck of his diphtheric child," we can write that doctor down as an ignorant ass, perfectly and wholly free from any knowledge of the causes and origin of the disease diphtheria.

The proof that this exudation is also in the *æso*phagus can be found by an examination of the contents of the ejection at the time of EMESIS. You can take a stick and hold the slime or mucous suspended before you, and in the case of malignant diphtheria this comes off like rope and bunches thick and heavy.

It has all the characteristics of the membrane except the putrefaction. It has not putrefied because of the presence of the gastric juice and because the air can not enter the stomach. But after a time this slimy material fills the small intestines so that nothing can pass. Then the lips turn purple, the nose is pinched the chin is cold, the beads of sweat start on the forehead and the little one is beyond the aid of any human power.

We therefore urge the reader to make these truths ones own and have the theory, the cause, the reason of all things firmly fixed in the mind.

Thus far we have said nothing about bathing or any outward application to the throat.

In regard to bathing we think the body should be daily sponged over in a warm alkaline bath and clothes changed at the time of each bath. Bed-clothes, pillow-cases, sheets or blankets are to be kept as clean as possible. And in cases of the very malignant type the patient should be totally isolated from the other persons in the house.

But our theory of the causes of diphtheria, and the success which has followed this treatment precludes any idea of "fat pork" around the throat or liniments or outward applications.

The disease is constitutional. Constitutional treatment is actively demanded.

Nature has pointed out with unerring finger the method of eliminating this poison by EXUDING THIS POISON INTO THE THROAT.

ASSIST NATURE.

Consider that the passages combined from the throat to the anus are FIVE times as long as the patient is tall. And the exudation is passed throughout this entire tract.

Consider that to clean off this exudation by STIMULATION, by STIMULATING this mucous tract, you ASSIST NATURE to cast it off and out of the entire system.

Reflect also, that this stimulation assists the Liver, pancreas and entire intestinal tract to become cleansed and when once you have a clean intestinal tract you have a chance to sustain the system by food. AND YOU ALSO HAVE PREVENTED THE diphtheritic poison from being absorbed. For when it is absorbed it produces general putrefaction.

Consider, that PUTREFACTION of diphtheria, does not commence until the air is placed in contact with the exudation, and that this exudation is material which has been cast out by the vital forces of the body.

This air strikes the exudation of the throat AND PUTREFACTION COMMENCES IN THE THROAT.

The more the exudation is exposed the more putrefactive surface you have reproducing itself with frightful rapidity.

Stimulation at once assists nature, weakened by the presence of this inferior dead material, to throw off and get rid of this material in the very quickest manner.

Notice also, that if the stimulation has cleaned off the throat and œsophagus and gathered a portion of this exudated material in the stomach the emetic has only to come up less than two feet while if physic is given you have five times further to go.

Formely we depended upon STIMULATION and ELIMINATION as physic. But now we depend upon stimula-

tion and elimination by every method which nature may suggest. Thus while we do not condemn any bathing or outward application, we assert that the rapid, safe and certain method of curing diphtheria, a disease born of vile protoplasmic materials, and a death of formed material, is to stimulate and eliminate as rapidly as possible.

If one desires to put a flannel around the throat, well enough. But keep away from the Hog and let fools use kerosene and other articles of doubtful utility. But reader, do you understand the disease, its causes, and nature's method of elimination and do you cure your case. You certainly can do it every time.

In regard to food, give baked apples and toast or allow a ripe orange to be sucked. Never allow milk in any case of diphtheria. Eggs and potatoes are poison to the patient.

No hearty food until the patient is secure from danger.

After the illness wash all the bedding and put them and all infected clothing in a room and burn sulphur, a pound or more in an iron kettle and close the room.

Allowing all infected clothes to lie in cold water in which there is three ounces of carbolic acid to every gallon of water, will kill all germs.

Diphtheria is hatched in dirt and filth. Fight this filth and dirt wherever you find it.

Do not allow a kerosene lamp to burn in a room with a diphtheric patient. Use a candle or a sperm oil lamp.

While you watch the patient, have the lamp in the next room except when giving medicine. Keep the person comfortably warm. Remember that if the patient is uneasy you may have a loaded rectum. See that the syringe is not neglected. This is a point to be looked after.

Lemonade is a good drink. So also is sage tea. Avoid and shun milk. There is no objection to having all teas and drinks well sweetened if desired.

The Two Different Diseases.

CHAPTER IX.

The purpose of inserting the subject of Scarlet Fever, in connection with Diphtheria is to show the vast difference in the two diseases. The difference in their origin, their character and their treatment.

Scarlet fever is an eruptive disease, always produced by a specific poison of a peculiar kind, absorbed or in contact with the skin or mucous surfaces of the body.

Diphtheria is a disease produced by an excess of inert, worn out or non-assimilated material in the system, arising from an excess of certain kinds of starchy, albuminous or milk food, producing grave constitutional disturbances, and a specific odor or smell, and exudation.

Scarlet fever is over the entire globe.

Diphtheria is only found where the Irish potato or barley is the principal food, as in north latitudes between 20 degs. and 60 degs., and is only the *peculiar throat disease* where the potato eater does not have a quantity of *acid* sufficient to transform starch into sugar.

Scarlet fever has always an eruption.

Diphtheria is not usually characterized by any eruption of the skin.

Scarlet fever is contagious to all or nearly every person who has not had it at some previous time. Seldom however, attacking persons over forty years of age.

But is rarely taken the second time.

Diphtheria is not contagious only as a septic poison, and cannot be reproduced or carried, nor taken unless the person so imbibing the poison has already grave constitutional disturbances in the system, or is predisposed to the disease.

Any person whose food consists of hog products, or whose diet is based on potatoes, milk and preparations of Baking Powder may have a chronic sore throat and have a mild form of CHRONIC DIPHTHERIA. This chronic exudation of vile or dead materials in the body manifests itself in catarrh and in LEUCORRHEA and an impure loaded skin.

Scarlet fever, when once over, allows the patient future immunity from the influence of its poison.

One attack of diphtheria does not prevent another future attack but has weakened and poisoned the patient just so much.

Although principally confined to children, scarlet fever occurs in any age in rare instances attacking the same person twice.

Scarlet fever is always accompanied by a fever, full, quick pulse, and great thirst, countenance flushed, breath feverish and possibly sweetish.

In diphtheria the pulse may be quick but small, thready, and there is very seldom high fever. Usually the skin is cool, clammy and possibly moist. Countenance pallid and frightened, breath offensive and rotten.

In diphtheria active treatment is beneficial, necessary and needs a constant repetition until the recovery is assured.

In scarlet fever, physic is dangerous and often fatal. Physic prevents the eruption from coming out, and causes the death of many little ones, and this the common doctors do not know.

In diphtheria physic may sometimes be given. In scarlet fever *never* give physic.

Scarlet Fever.

CHAPTER X.

Scarlet fever although claimed to be of a modern origin, is by others asserted to be a modification of an Arabian disease. It is known as a contagious fever propagated by a specific poison and is first described as an epidemic of 1610 in Spain, where it was very severe and fatal. In 1689 it had traveled or been carried to Naples, Italy, and is described as a fever of "great malignancy," and fatality. In 1689 it had reached London, and was described by Dr. Morton. In 1735 it had reached North America, and raged with "great violence." (See Gregory's Practice, page 237.)

The germs of this disease can be carried about in woolen clothing for months.

An article of wearing apparel that has been exposed to a case of scarlet fever while the patient is desquamating or "peeling off," may be packed away, transmitted a thousand miles and then inoculate an entire neighborhood.

It is to this method of transmission that the rapid spread of scarlet fever is attributed.

In 1660 and in 1670 it had spread over Europe, and since that time periodical epidemics have occurred with great regularity. The most eminent medical authorities, Drs. Cullen and Sydenham, seeing the mild form, decided that putrid sore throat and the "rash" were two distinct diseases. Dr. Withering, an eminent physician, also states that he at one time thought they were two diseases, but experience taught him that the specific poison produced them both.

Sir Gilbert Blanc (1828) said he "never knew a case

occur to a person turned forty." Although it sometimes occurs twice, yet it is very rare to find the second attack in America. It often appears at the close of the summer, and apparently, a severe frost may check it. It sometimes appears with greater severity in the winter.

Whether the specific poison is more prevalent in winter than in summer may be doubted, as we shall endeavor to show that it is the condition of the patient that produces the differences between a mild and a severe case.



The Symptoms.

CHAPTER XI.

It is quite evident that the different forms may be ushered in by different symptoms. The mild form may show symptoms of scarlet fever by an immediate efflorescence, a slight rash, sleepiness, languor with neither sore throat nor tenderness of the eyes. The child may have a desire to play during the entire day, and be restless, flushed, or fretful during the night.

Or, it frequently manifests itself by a severe attack of vomiting, a sudden diarrhea, a persistent paleness and weakness. The child sleeps and in a few hours the scarlet eruption appears on the breast and loins.

It is at this stage that so many little ones are killed, by loving parents giving castor oil or some physic, to irritate the bowels; rash never comes to the surface and the child is doctored or purged for the pneumonia and dies. Let the parents bear in mind the old adage that caution is the parent of safety, and if nothing else is gained, do not give physic. We are greatly in earnest about this as we consider *physic* in scarlet fever to be no better than murder.

Physic irritates the bowels. It deranges the circulation. *Physic prevents the rash from coming to the surface* and so prevents the healthy action of the skin. *Physic is cooling*, while the disease needs a mild, warming stimulant.

Physic makes the *sore throat worse*. In short, physic in scarlet fever is a fatal mistake, and one that should be shunned by every parent and every physician.

In the second form or *anginosa*, there may appear

sore throat, chilliness, nausea, vomiting, skin dry, headache, short breath, pulse up to 120, anxious countenance, temperature of the body apparently higher than usual.

If the child is nervous, a convulsion is not unusual, especially if there has been a hearty meal of pork, potatoes and pastry eaten a short time previous.

The tonsils may be swollen and very sore, very dry and very painful. Sometimes the scarlet fever "points" can be seen in the mouth and fauces, twenty hours before the surface eruption.

As a general statement we may assert that the rash appears on the second day, but this is not always the fact. In mild cases it may appear the next morning after exposure, and in others where pills, physic, doses of Dovers' powders, opium, potash and morphia have been used, the rash may not appear for weeks; the patient meantime suffering from what appears to be continued or typhoid fever, or lung fever, so deceitful are the symptoms where the case has been improperly treated.

I knew in 1878 a beautiful, healthy child, aged thirteen years, a girl, an only child, exposed to the scarlatina whose first symptom was *vomiting*.

The cigar smoking, beer-drinking doctor who was called, pronounced the case PNEUMONIA. His remedies were DOVERS' POWDERS and CALOMEL. The girl died. The minister who preached the funeral sermon called this death a "visitation of Divine Providence." I feel a little hesitancy in acknowledging the truth, but as a fact, I was glad when I learned that that tobacco-sucking, beer-guzzling, quicksilver dosing animal, yclept a doctor, had gone over on the other shore, where he could not murder any more children, nor desolate any more homes.

If the rash appears on the second day, it will seem *rough to the touch*, and the points of the rash will seem *to protrude* through the skin. Usually the rash is of a *bright scarlet*, and may be seen upon the breast sooner

than on any other portion of the body, although it can sometimes be distinguished about the loins. The tongue may show *points* of red even through a heavy coating.

SCARLET FEVER.

Eruption appears in a few hours or on the second day on the face, neck and breast, and goes down to the feet.

Soreness of the throat, difficulty of swallowing.

Exudations of ash colored product in the throat.

Rash appears like innumerable points.

Color scarlet.

Cough, if any, short and dry, yields to mild remedies.

Continued fever. Itching

Face swells third day.

MEASLES.

Eruption appears at the end of the third or fourth day.

Very little, if any soreness of throat but the eyes are sore and tender to the sight. Eyes run water.

Rash appears in patches and "runs together" at first on the forehead and roots of the hair.

Color reddish brown.

Cough hard, obstinate, tearing and harsh, and the patient in coughing raises a thick, viscid phlegm.

Distinct remissions in the morning. Skin rough and dry but not much itching.

Rarely any swelling of the face.

In both diseases it is important not to allow the patient to take cold.

If the patient improves, the tongue will clear off, commencing at the end, and be red where the coat has left. This is a favorable symptom, and may be depended on as showing the decrease of fever. The appetite will return gradually as soon as the tongue appears to clear off.

The malignant form, or Anginosa Maligna, may be ushered in by pain in the stomach, sudden faintness, purging, irregular, small, feeble pulse, stupor, swelling of the throat, cadaverous odor, blueness around the eyes, and every mark of debility. These symptoms are very serious.

The New England *Journal* of January, 1825, gives an account of many cases ushered in with the above symptoms, which usually proved fatal. In the west this complication occurs very rarely and always with dark brown coat upon the tongue, which rapidly turns to black, showing a typhoid fever character. Theswelling of the face on the second or third day may take place in this form of scarlet fever, although the swelling of tonsils and swelling of the neck may take place in scarlatina anginosa. In the malignant form of 1745, described by Fothergil, London, there were dark sloughs in the throat, intolerable foetor, delirium, coma, pulse small, feeble, irregular and intermitting. A dry skin denotes a severe attack. A moist skin is favorable. Cold, clammy hands and feet are grave symptoms.

The efflorescence usually lasts ten days and peels off in scales, (desquamates). About the seventh day the patient will complain of pain in the hands and weak knees. If the patient is an adult, the fourth day is considered the dangerous period.

Especially is this the case if purging or diarrhea ensues. The commencement of peeling off will be about the sixth day from the appearance of the rash, but this is not always to be depended upon, as a patient that is properly bathed may show the desquamation the fifth day, and others may have the rash appear and seem to grow thicker, redder and more tender, and more tender to touch until the seventh day.

There are two symptoms not laid down in the books, which the writer considers of great value.

First, when the eruption comes out well and is on the TOP OF THE FEET, the soreness of the throat decreases.

Secondly, when the moisture or sweat is over the whole body, or when in a gentle perspiration, and urine is free, the patient is out of danger.

In some instances the groins may be chafed, or crack open and bleed. This symptom, however, is usually

where the alkali in the wash has been excessive. It does not occur where the patient has been oiled, or properly washed and wiped dry.

From 4 p. m. to 9 p. m. the most violent fever may be expected, and the most violent itching. A cessation of thirst, remission of fever and sound sleep may be expected in the morning.

There are four distinct modes of treatment, viz., the regular medical, hydropathic, homoeopathic and the domestic treatment.

We shall not at this time advert to the old school practice further than to say it is to be hoped that it is constantly changing for the better, and adopting the remedies and methods of cure likely to succeed, but the reason of their accepting new and better theories is because they have been fairly whipped upon their own ground by those whom they denominate quacks. They have been driven out of that. They gave largely of quicksilver and *they do this at the present day*. Now their favorite remedies are the most deadly poisons, and it is not to be wondered at that common people are afraid of them.*

*There is no disease in which the old regular or mineral doctors have more radically changed their treatment than in Scarlet Fever. At first they *bled the children*, and one, Dr. Morton, acknowledges seeing and probably treated *three hundred children in one week who were all bled and all died*. After they had murdered enough by bleeding, they physicked. Even to this day the regular country doctor prescribes CALOMEL! (and it is recommended in the Diseases of Children by Day, page 134, and on page 130 he says, "A grain or two of Calomel and an active aperient may be ventured upon if the pulse is full and the inflammatory fever runs high.") It is no wonder with these absurd text books before them that the young allopathic regular old school gentlemen murderers, should lose patients!

Nor do we wonder as we turn the pages of their books and read: (Aitkens Practice of Medicine, Vol. 1. page 448.) "The continued prevalence and great fatality of Scarlet Fever in England and Wales, and especially the London registration district are such as to call for the earnest consideration of all classes of the public. In order to show the magnitude of the evil it will be sufficient to say that the disease in two years, 1863 and 1864, destroyed in England more than *sixty thousand persons*. In 1869 the victims in London amounted to 5,803, and London maintains a permanent stock of 2,000 centers of contagion." In North America scarlet fever is a most fatal disease in the hands of the old school up to the present date. To lose two out of three cases or one out of every two cases has been so uniformly the record with the old regulars, more especially the younger members that people in despair have flocked to

Between the careless, whiskey-drinking, pill-peddling and patent medicine vending, tobacco drug store and the regular allopathic doctor there is too intimate a partnership to be healthy for intelligent beings.

The hydropathic or water treatment consists in the constant and varied use of water. In many instances this is a safe treatment, and has been successful. The modes of treatment are minutely described in Trall's Encyclopedia, a very useful book for the family.

It is appropriate to state that water should be applied by one who understands the results of its action, as it is a dangerous remedy when used against the indications.

THE HOMŒOPATHIC TREATMENT.

If there is any remedy of which that large class of physicians styling themselves homœopaths, are proud, and constantly are praising as an evidence of their success, it is the remedy called BELLADONNA used in the treatment of scarlet fever.

They have appropriated this vegetable poison which

the little doses of poison administered by the greatest and most ignorant frauds and humbugs the world ever saw—*The Homœopathists*. Yet the homœopathist *by not giving any medicine* has so far succeeded as to win his way into the best families and the best paying practice in the United States; and he has done this *because his doses of poison are not so large and are not so actively poisonous and fatal as those of the old school*. This has led to another advance in the old school, and Aitkins 449 says: "In the mildest form of the disease it is sufficient to confine the patient to the house; to enjoin a strictly milk diet; to regulate the bowels; and above all things, to avoid the *nimia diligentia medicorum*, (which may be translated as meaning to *avoid active courses of medicine*.) Any active interference with the normal course of the disease is to be avoided. The sick room ought to be kept at a uniform temperature, and not exceed 55 to 65 degrees F., and the patient must not be over laden with bed clothes."

One can see how different this is from the bleeding and calomel of the old "regular" method. Yet I have known within the past six months a young regular give a dose of medicine, physic, followed by an opiate, which carried off two of three in one family. While in another instance, instead of having the child bathed, he dosed it with opium. Its neck swelled (cervical glands) and it lived a few weeks under the administration of alcohol and died. It would be absurd to say that no school of medicine lost patients. The argument is that children properly fed and who are not given poisons as medicine will not die in any disease. This is the point where the common people should educate themselves. Calomel, Potash, Aconite, Strychnia and Belladonna would then be discarded from practice and also the poisoners who prescribe them.

they give indiscriminately and call it a specific for scarlet fever.

We presume no one will deny that Belladonna is given at all times and under all circumstances for scarlet fever by the so-called Homœopaths. It is a fact, and one easily proved by reference to their writers.

This remedy is a poison, so subtle, usually given in so minute doses, so inappreciable in its direct effects that thousands of children are annually carried to the grave without the knowledge of the cause of death being suspected. Belladonna is a cumulative poison. It destroys the brain. It cuts off or destroys the transmission of intelligence by the nerves, hence people without thinking suppose the effect is for the improvement of the children.

But the after effect is deafness, short-sightedness, paralysis and general softening of the brain, and a marked deleterious influence upon the great sympathetic nerve which is shown in the hollow cheeks and impaired digestion and nutrition of that large class who have taken belladonna as a medicine.

It is true that the so-called homœopaths use also the water treatment, but when they do this they stultify Hahneman and prove themselves frauds, by following another practice. They may say and try to prove that they are at liberty to select the good from all schools. When they do this they acknowledge themselves to be Eclectics, and confess themselves medical swindlers of the basest stripe.

It is a fact since the world has known homœopathy there has been a greater increase of paralysis, palsy and brain softening than ever before recorded in the same space of time. And the writer believes it is largely caused by the use of powerful vegetable poisons which leave no discoverable traces in the system. Among these poisons Belladonna, Aconite and Strychnia stand in the front rank, and to the so-called homœopathic treatment we can look as the cause of the great

majority of the cases of blindness, brain softening, visual illusions, palsy and paralysis of Americans.

But while we may seem hard on our homœopathic bretheren, we want it understood in the plainest and most unmistakable terms that the homœopathists are far ahead of the allopaths in safety. If you cannot trust yourself call in a homœopathist every time. When the allopath comes into your door remember that a wholesale poisoner comes in who is going to "relieve suffering" by killing the life of your child.

Shun the allopath as you would shun the poisoner. We may assert the ignorance of homœopathist, but we assert that the allopath is an educated poisoner, a murderer by profession.

OUR DOMESTIC TREATMENT.

By referring to symptoms, or from the knowledge of exposure to scarlet fever, the parent can decide whether the child has contracted the disease. If so, do not be alarmed or grow wild. Take plenty of time for your prayers, but also keep in your mind that scarlet fever is successfully treated and every case saved by many physicians. Poisons kills the patient. Not the disease.

If a physician is called, plant yourself on one solid proposition, and make the physician your friend and counselor at once by telling him that *physic in scarlet fever* is very *dangerous*. If the doctor asks you why, tell him because physic irritates the bowels, and prevents or hinders the rash from coming out.

If the child is hot, bathe it all over *quickly* and change its clothes for a night dress and place it in bed.

If the bowels have not moved or the head aches, or the throat is much sore use an enema made of an infusion of catnip, mint or sage. Repeat this enema until there is a free operation of the bowels.

Make a tea of:

Canada snake root,	
Pleurisy root,	Sage.

Mix together of each a little teaspoonful. Place this in a cup and steep, by turning on boiling water. Let it keep warm and covered thirty minutes. But *do not boil this tea.*

Give a tablespoonful of this tea warm for a child of seven, every half hour until the skin is moist, or the rash is well out. When the rash is well out on the feet you will see the soreness of the throat leave, and the appetite return a little. Give as food, toast, a little soft warm water and as much sugar as wanted, butter, baked apple, lemonade to drink, also cider, tamarind water, or allow an orange sucked, and all the pure cold water for drink that the child craves.

But avoid in diphtheria, scarlatina, measles or croup, eggs, milk, potatoes, fish, pickles, cheese, pastry or garbage made from a poison, baking powder.

When the child is restless, uneasy and hot, bathe it all over with cool water, in which you dissolve a heaping teaspoonful of soda to every quart of water, and rub dry. No matter if you do it fifty times a day, it will not be dangerous or hurtful provided the child be hot on the skin.

The clothes should be often changed and should be clean and dry at each change.

A towel may be wrung out of cool water and applied to the throat and a dry one around that. This wet towel may be changed frequently. If the patients' throat is very sore and an exudation appears, the following may be used as gargles, either separately, or combined in equal parts:

Fluid Extract Blackberry root,

“ Golden seal (without alcohol),

“ Serpentaria,

“ Wild Indigo (Baptisia Tinctoria).

They may be diluted with water, or with water and vinegar diluted.

Or you can give a weak composition tea in tablespoonful doses. (What is indicated by a tea is *an in-*

fusion of any article. Nearly all infusions are made, as a general rule, by putting one tea-spoonful into a cup of boiling water and allowing it to steep covered from ten minutes to an hour. All herb teas are herb infusions and should be strained. For children they can be sweetened to suit the taste.)

Dr. John King orders the entire body greased with a pork rind, but our experience is against the use of hog's fat.

Other physicians have the body rubbed with oil. Both of these articles are useful and may be employed where the itching cannot be allayed by the washing. The washing frequently is far better and safer as it always allows the rash to come to the surface. The method is to grease the body all over where the itching is annoying.

Keep up the dose of some mild stimulating tea, until the rash is out. Watch the symptoms of heat and cold, remembering that if the patient is *cool*, no water should be applied to the surface of the body; follow up the drinks in little doses. Allow no scrubbing of floors or washing in the house. Keep the temperature even and you will see your child improve each hour. The eruption keeps out about *three days* and then disappears slowly! *fades away*.

1. Get the rash to the surface.
2. Keep the body warm. The temperature even. Have a thermometer in the house. Keep the temperature at 68 to 70 degrees. Have fresh good air in the room.
3. Sustain the strength by mild food and cooling drinks. If there is no appetite do not force the child to eat. Meat should not be allowed until the patient is better and then sparingly. Soups may be allowed as the patient recovers.

The very safest food that we have found in the northern latitude is a well baked apple and a little toast.

Strawberry, raspberry or currant jelly may be allow-

ed. If the child or patient has been a tea drinker, let it have raspberry leaf tea to drink with the meals. By adding milk and sugar it is made very palatable. Or if it is craved, give a little roasted barley or parched corn coffee. Both of these are somewhat nutritious.

4 If the bowels are clogged, give an injection to the bowels of sage tea or of a weak ginger tea.

5. If the urine is scanty, give a tea of mint.

6. If the child is restless and wakeful make a tea of equal parts CYPRIPEDIUM, SCUTELLARIA and HOPS, (heaping teaspoonful of mixture to cup of boiling water; steep and sweeten; strain carefully,) and give teaspoonful every half hour until the child is asleep. This is *not* poison, and is a thousand times more reliable than opiates and the poisons *aconite* and *belladonna* besides it is far more effectual *with the bathing* than all the poison and deadly opiates.

I presume, as this will meet the eyes of some patients who scold and fret, it may be advisable to suggest that if ever a child is to be treated with the utmost kindness and forbearance it is during the prevalence of this disease. Get the child new playthings, new books and have it as constantly cheerful as possible. A little extra expense for some cherished toy, or article of dress, or a new picture book will be amply repaid by the cheerfulness of the little sufferer.

Change all bed clothes and night dress every day. The poison of scarlet fever will run its course, and have its allotted time, but it is as amenable to treatment as a bad cold, PROVIDING the child is not an excessive eater of eggs, milk or potatoes.

And also PROVIDED that the child does not have a HEART DISEASE arising from improper treatment AT BIRTH :

With one remark we will now take our leave of the reader. It is this :

There is always a CAUSE.

The CAUSE of the difference between a case of mild

scarlatina, and a case of Malignant scarlet fever, with putrid sore throat, is in the constitution of the patient. And this constitutional cause arises from food. Hence a *pork, potato and grease eater will have a malignant form* of scarlet fever, while an oat-meal eater has a mild attack. These are facts from experience.

Feed your children properly, and they CAN NEVER HAVE DIPHTHERIA.

Feed your children properly, and take a little care of their clothing, and one need not be afraid of scarlet fever.

Knowledge is power.

MEASLES.

We treat measles successfully on the same principle that we do scarlet fever.

Give the same infusions and also possibly more composition until the rash is well out on the surface.

If the cough is severe I use an infusion of slippery elm bark. This is excellent for a sore throat and soon relieves the cough.

If the eyes are tender keep the room darkened and let a soft cloth wet in warm or cold water as is most pleasant be laid on them and changed as it becomes too warm. Do not allow any soap put on the body in either eruptive disease. Use soda and if soda appears to render the skin harsh and dry, use the water clear.

The same food and other care is necessary in measles that is necessary in scarlet fever. Measles as a disease is seldom fatal, but mark this, very often the patient dies from the effect of poisonous medicine.

Useful Books Published by the Same Author.

WHY WOMEN DIE IN CHILDBIRTH, and Care of the
NEW-BORN. Paper, 50 cents; Cloth, 75 cents.

WHAT I KNOW OF HUMAN TEETH. Illustrated.
Paper, 50 cents; Cloth, 75 cents.

SEVEN STUDIES FOR YOUNG MEN. Illustrated. Paper,
50 cents; Cloth, 75 cents.

CHILDBIRTH AND THE CHILD. Illustrated, colored
plates. Paper, \$1.00; Handsomely bound, \$1.50.

MOTHER AND CHILD. A Monthly Journal. An original
Magazine, devoted to the best interests of the MOTHER
AND CHILDREN. Issued on the 20th of each month. No
advertisements. Terms, \$1.00 per year, in advance. Write
for sample copy.

A full line of Pure Botanic Drugs, Soaps, and Physio-
Medical Books always on hand.
Orders by mail promptly attended to.

Address, **MELVILLE C. KEITH, M. D.,**
Box 131, Minneapolis, Minn.

ANNUAL ANNOUNCEMENT

—OF THE—

Physio-Medical College of Indiana, INDIANAPOLIS.

The fifteenth annual session of the Physio-Medical College commences on September 20th, 1888, and continues twenty-four weeks. Six lectures will be given for five days of each week. On Saturday the students will attend the Hospital Clinics and such special lectures as may be arranged for by the Faculty.

BOARD OF TRUSTEES.

ANDREW WALLACE, Esq., *President.*
N. R. ELLIOTT, Esq., *Treasurer.*
W. H. DRAPIER, Esq., *Secretary.*
ELD. J. L. PARSONS.

A. W. FISHER, M. D.
BENJAMIN ROGERS, Esq.
B. F. COFFIN, M. D.
H. R. PRITCHARD, Esq.

FACULTY OF MEDICINES.

N. D. WOODARD, M. D.,
Professor of Descriptive Anatomy.
W. A. SPURGEON, M. D.,
Professor of Surgical Anatomy.
J. M. THURSTON, M. D.,
Professor of Histology and Physiology.
GEO. HASTY, M. D.,
Professor of Theory and Practice of Medicine.
E. ANTHONY, M. D.,
Professor of Medical and Operative Surgery.
J. P. JULIAN, M. D.,
Professor of Chemistry and Toxicology.
G. N. DAVIDSON, M. D.,
Professor of Botany, Materia Medica and Therapeutics.
C. T. BEDFORD, M. D.,
Professor of Obstetrics and Diseases of Women and Children.
J. REDDING, M. D.,
Professor of Microscopy and Pathological Histology.
J. M. THURSTON, M. D.,
Professor of Diseases of the Ear, Eye and Throat.
BARTLEY SMITH, M. D.,
Lecturer on Medical Jurisprudence.
N. D. WOODARD, M. D.,
Demonstrator of Anatomy.
M. VEENBOER, M. D.,
Sanitary Science.
E. ANTHONY, M. D.,
President of Faculty, No. 90 Massachusetts Avenue, Indianapolis, Ind.
C. T. BEDFORD, M. D.,
Secretary of Faculty.

FEES.

Professors' Tickets, \$75.00; Matriculation, first term only \$5.00; Graduation, \$25.00. Hospital Ticket, \$3.00; Demonstration fee including material \$5.00.

Demonstrators' ticket—including dissecting material, \$5.00.

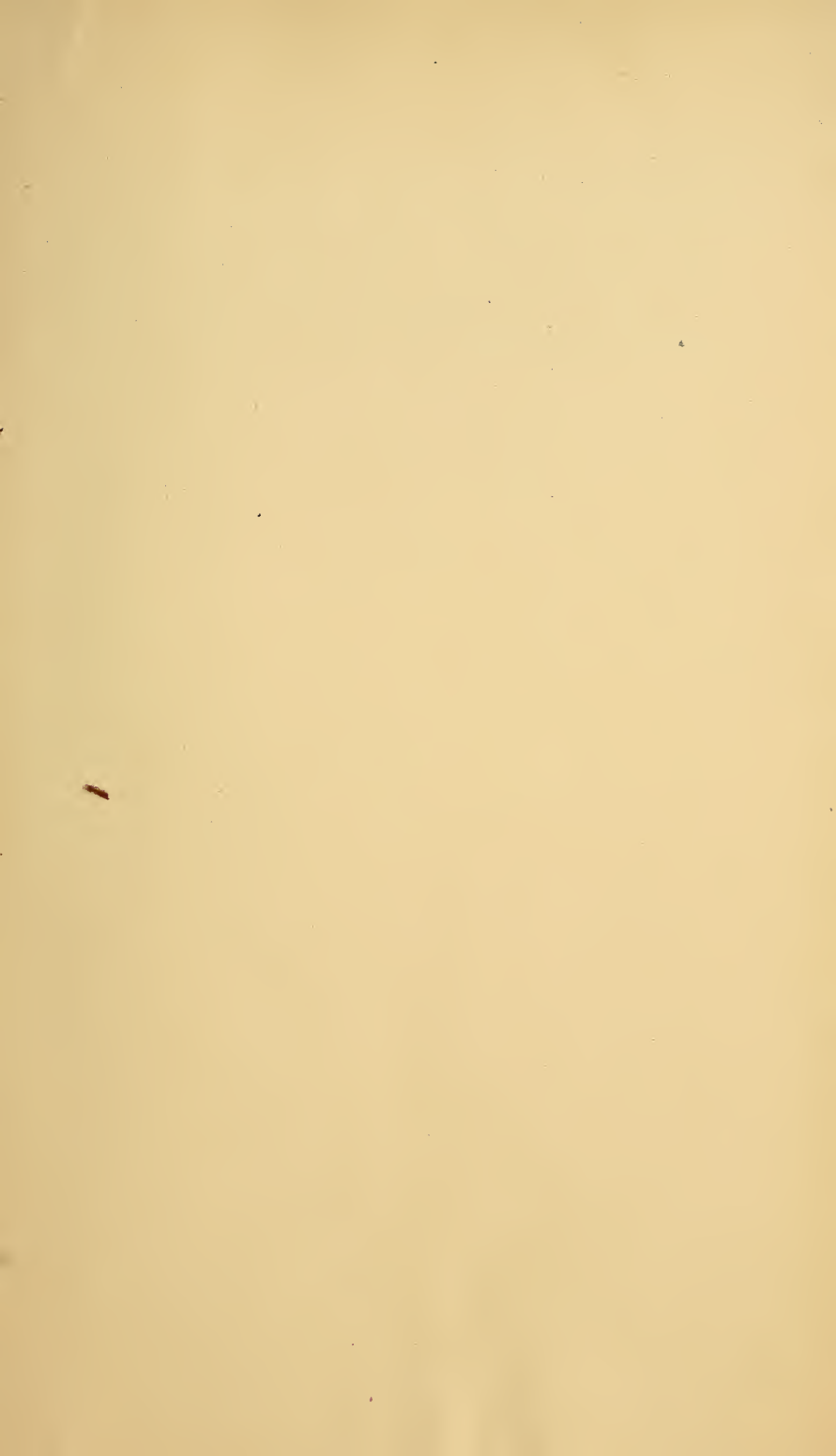
TERMS—Cash, on entering, or bankable paper, due in 120 days.

Applicants for graduation will be required to attend Hospital at least one term. Each student will be expected to be present at the openings of the sessions, as no deduction will be made except for protracted illness.

Graduates of other medical colleges will be charged \$40.00 for full course in this college.

Good board, including furnished room, etc., about \$5.00 per week.

For further information, address the Sec., No. 290 Massachusetts Ave., Indianapolis, Ind.



(Dec., 1888, 20,000)

BOSTON PUBLIC LIBRARY.

One volume allowed at a time, and obtained only by card; to be kept 14 days (or seven days in the case of fiction and juvenile books published within one year) without fine; not to be renewed; to be reclaimed by messenger after 21 days, who will collect 20 cents besides fine of 2 cents a day, including Sundays and holidays; not to be lent out of the borrower's household, and not to be transferred; to be returned at this Hall.

Borrowers finding this book mutilated or unwarrantably defaced, are expected to report it; and also any undue delay in the delivery of books.

* * No claim can be established because of the failure of any notice, to or from the Library, through the mail.

The record below must not be made or altered by borrower.

5/31.
3/30
K. MAR 10

